

Ranger Rick

National Wildlife
Federation

August 1988



EDITORIAL ADVISORY BOARD

Jay D. Hair	Chairman President and Chief Executive Officer, N.W.F.
James D. Davis	Associate Director Consumers Union
Edwin B. Kurtz	Professor Chairman of Life Sciences University of Texas of the Permian Basin
Nancy E. Seminoff	Dean College of Education Winona State University

EDITORIAL STAFF

Gerald Bishop	Editor
Robert L. Dunne	Executive Editor
Donna Miller	Design Director
Claire Miller	Managing Editor
Sallie A. Luther	Senior Editor
Elizabeth Blair	Senior Editor
Carolyn Duckworth	Associate Editor
Kathleen Walsh	Production Editor
Robyn Gregg	Asst. Production Editor
Jack Shepherd	Senior Production Artist
Holly Ritland	Designer
Rhonda Lucas Donald	Editorial Assistant
Deborah E. Munsey	Editorial Secretary
Judy Braus	Contributing Editor
Paul R. Wirth	Quality Control
Trudy Farrand	Consultant

Ranger Rick (ISSN 0738-6656) is published monthly by the National Wildlife Federation, a nonprofit corporation, 8925 Leesburg Pike, Vienna, VA 22184-0001. Second class postage paid at Vienna, VA, and at additional mailing offices. Printed by Holladay-Tyler Printing Corporation, Rockville, MD 20852-1618. **Ranger Rick** is a publication available only to members of Ranger Rick's Nature Club; annual dues: \$14.00. Add \$8.00 for address outside United States. **Ranger Rick** is reproduced on "Talking Books" by the Library of Congress and distributed free by regional libraries. **Change of address:** Allow six weeks for change to take effect; send both new and old addresses to **Ranger Rick, Membership Services, 8925 Leesburg Pike, Vienna, VA 22184-0001.**

Federation offices: Article proposals, art, photographs, and readers' letters should be sent to **Ranger Rick, 8925 Leesburg Pike, Vienna, VA 22184-0001.** (Unsolicited editorial material, for which the publisher assumes no responsibility, must be accompanied by a self-addressed stamped envelope.) All other correspondence should be directed to the National Wildlife Federation at the above address.

RANGER RICK®
magazine is published by the

NATIONAL WILDLIFE FEDERATION
"Working for the Nature of Tomorrow"

BOARD OF DIRECTORS

Officers: Leonard A. Green, Chairman of the Board; Robert H. Gardner, Jr.; George H. Hulsey; Phillip W. Schneider, Vice Chairman.

Immediate Past Chairman: Carl N. Crouse.

Directors: Ralph W. Abele, Virginia Beall Ball, Mary Frances Berry, Dean L. Bunrock, Burnett C. Dahl, Dan E. Cunningham, Delano Deen, Benjamin C. Dysart III, Sheldon M. Eppich, Maurice K. Goddard, Don F. Hamilton, Charles T. Haskell, James E. Hemming, Emily M. Kress, John F. Lantz, Raymond L. Linder, Henry Lyman, Elizabeth W. Meadowcroft, Gordon G. Meyer, Carl Reidel, Rudolph J. H. Schafer, Clarence A. Schoenfeld, Gene G. Stout.

Honorary Presidents: Thomas L. Kimball, Claude Moore, Louis Lemieux.

FEDERATION EXECUTIVE STAFF

Jay D. Hair, President and Chief Executive Officer; Joel T. Thomas, General Counsel and Secretary; Alric H. Clay, Senior Vice President for Administration; William W. Howard, Jr., Senior Vice President for Conservation Programs; James R. De Santis, Vice President for Public Affairs; Francis A. DiCicco, Vice President for Financial Affairs; Lynn A. Greenwald, Vice President for Resources Conservation; S. Douglas Miller, Vice President for Research and Education; Larry J. Schweiger, Vice President for Affiliate and Regional Programs.

Copyright 1988 by the National Wildlife Federation. All rights reserved.

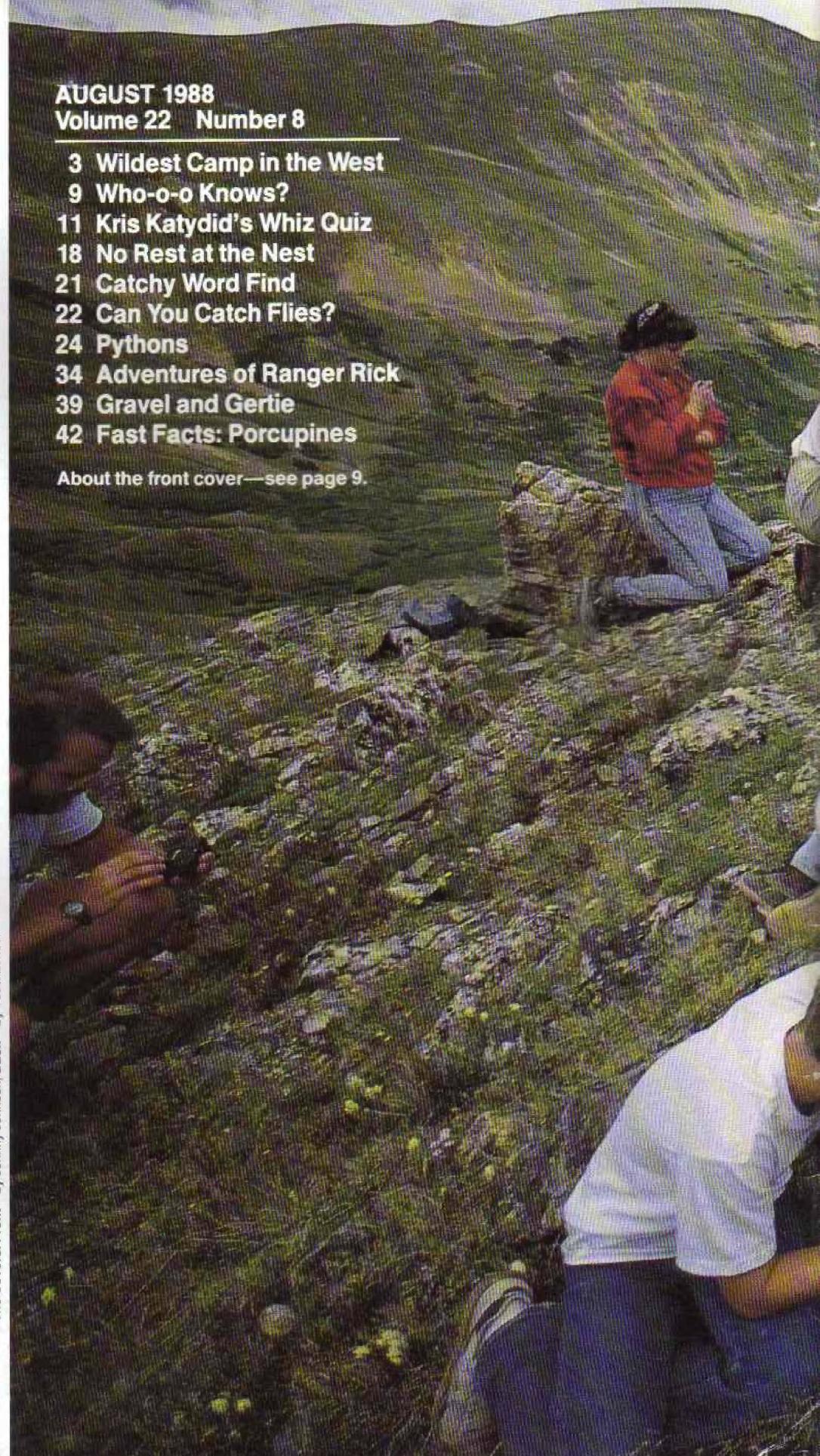
Postmaster: Send address changes to **Ranger Rick, 8925 Leesburg Pike, Vienna, VA 22184-0001.**

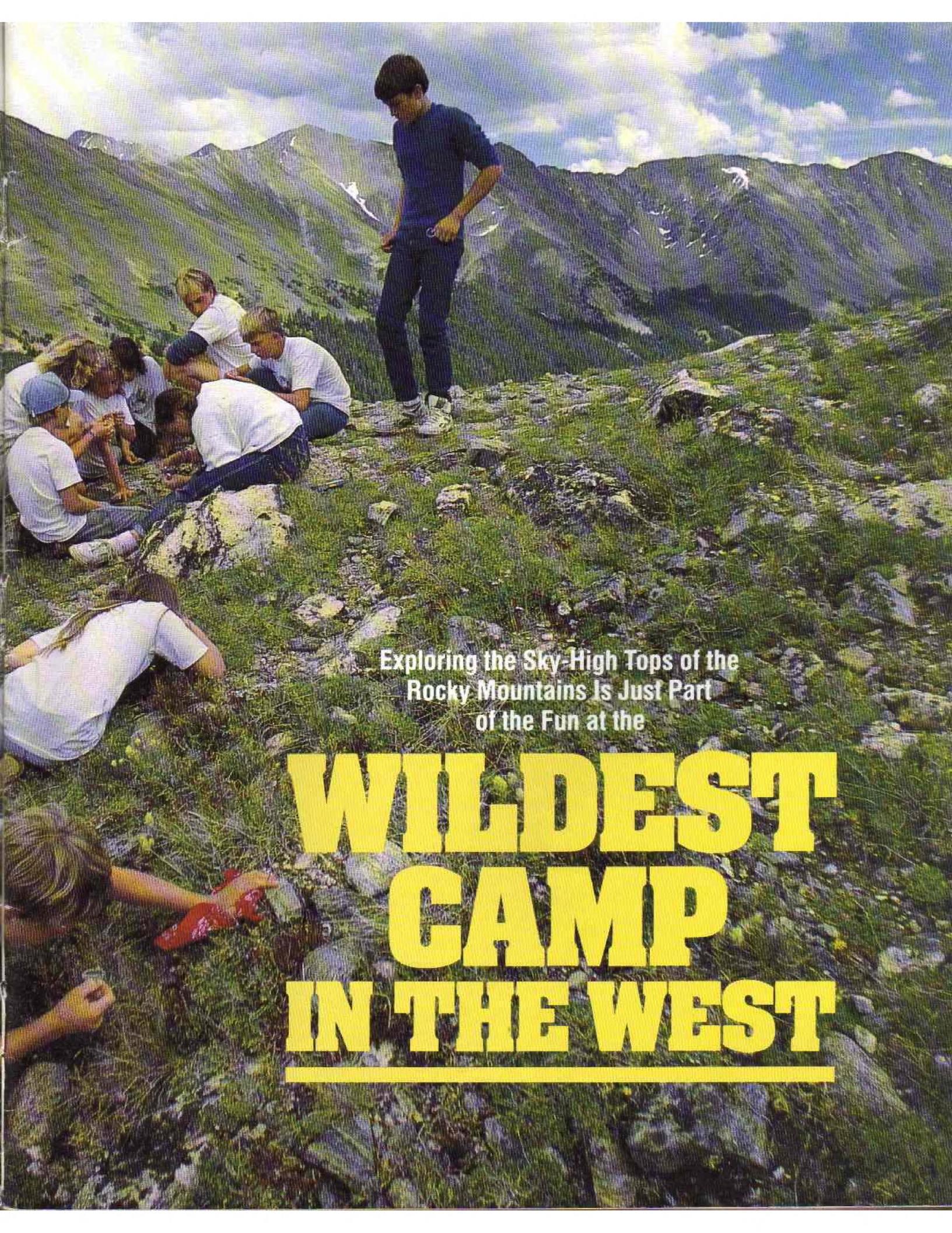
AUGUST 1988
Volume 22 Number 8

- 3 Wildest Camp in the West**
- 9 Who-o-o Knows?**
- 11 Kris Katydid's Whiz Quiz**
- 18 No Rest at the Nest**
- 21 Catchy Word Find**
- 22 Can You Catch Flies?**
- 24 Pythons**
- 34 Adventures of Ranger Rick**
- 39 Gravel and Gertie**
- 42 Fast Facts: Porcupines**

About the front cover—see page 9.

The Covers: Front—by Johnny Johnson; Back—by Yossi Eshbol



A vibrant photograph capturing a group of approximately ten children in a rugged, mountainous landscape. In the foreground, several children are sitting on the grassy ground, some holding small objects like sticks or stones. One child stands prominently in the center-right, looking down at something in their hands. The background features majestic, snow-capped mountain peaks under a bright, slightly cloudy sky.

Exploring the Sky-High Tops of the
Rocky Mountains Is Just Part
of the Fun at the

WILDEST CAMP IN THE WEST



by Jessica O'Brien, 10, as told to Carolyn Duckworth

After almost a week of driving, my family and I were finally on our way up into the Rocky Mountains. We were far from our home in Virginia, but *very* close to the National Wildlife Federation's Western Wildlife Camp in Colorado.

When we drove into the camp, I couldn't believe my eyes. Everywhere I turned, I saw gigantic snow-capped mountains. What a neat place to live—even for just ten days!

As I waved good-bye to my

parents, I felt a little nervous. But I'd been to the Eastern Wildlife Camp in North Carolina the summer before. I knew that soon I'd be so busy I wouldn't miss them.

That first afternoon I met my nine cabin-mates and our counselors. And that night at the big picnic I had a chance to meet other kids. Campers had come from all over the United States.

After we ate dinner, all of us gathered around the campfire. The counselors started singing

a silly song about Quests and Mini-Quests. (That's what they called the nature activities we'd be doing.) Each verse described a Quest. As I clapped along, I thought: *Snow in July? Old silver-mining camps? Mucking in mud? This could be a crazy time!*

Next day, we each chose one Quest to work on in the mornings and two Mini-Quests to do in the afternoons. I wanted to do *everything!*

For my Quest, I finally decided on Plants and Trees. In

the song there was a line about this Quest that I liked a lot: "Find out why the perky pika thinks tundra is tops!" I've always wanted to see a pika (that's a furry animal a little smaller than a guinea pig), and I had no idea what *tundra* was!

TUNDRA CLOSE-UP

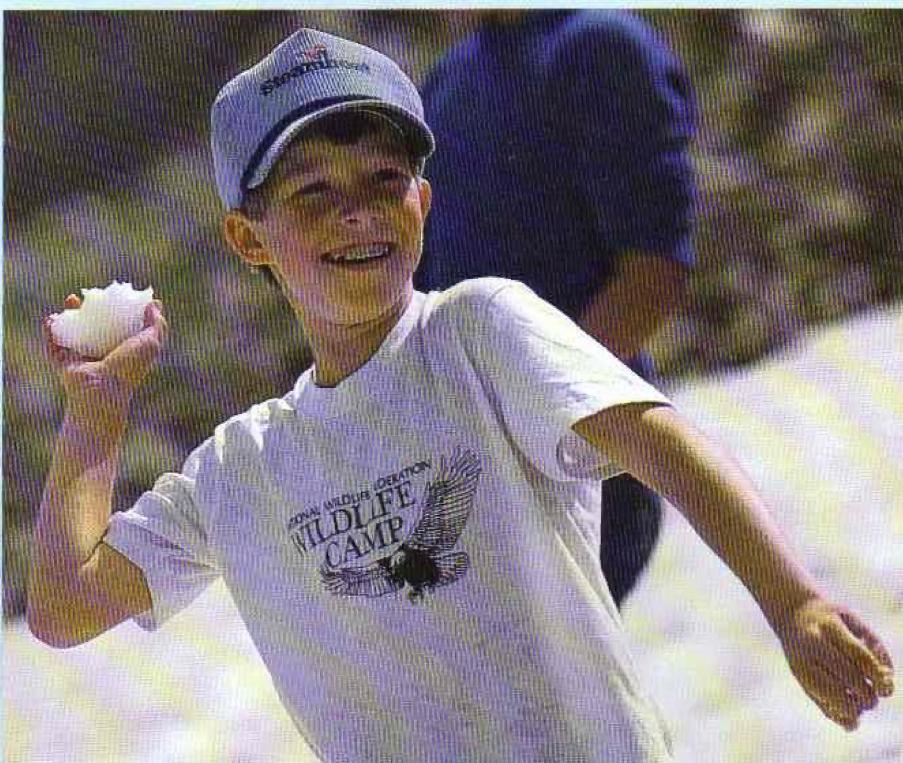
My Quest-mates and I soon found out that tundra is a special kind of place. (See photo on pages 2-3.) It's land in the Arctic or high in the mountains where the winds howl and the air is freezing most of the year. Trees and shrubs can't grow there—only small, low-growing plants survive.

We learned that when exploring the tundra, you have to be extra careful not to step on the plants. (Some plants are 100 years old!) So we tried to stay on the trail or step from rock to rock.

We got down on our hands and knees to study the plants up close. With our magnifying glasses we could see that some of them had fuzzy leaves. The fuzz helps protect the plants from the cold wind.

As we poked among the plants, we watched for pikas to appear nearby. We knew they were there—we could hear them squeaking. Finally I spotted one perched on a rock with a mouthful of plants. In a flash, it was gone. Somewhere among the rocks it was piling

On a Quest you can take a close look at a tundra flower (left), play in the snow on a warm July day (below), or meet a pika on a mountaintop (bottom).



Photos by David Cupp

up food for the long winter.

While I was on my knees in the tundra, a friend of mine was up to her knees in mud. In a valley near camp, she was searching for the animals that lived in and around a big pond. It was the messiest and most fun part of her Pond and Stream Quest. (See photos next two pages.) The *coldest* part was wading in the river that ran near camp. I shivered when she said that the water was only 50 degrees [10° C].

My friend was one of the



Photo by Thomas Kitchin/Wallace Photos

few campers who saw a beaver. It was swimming on the far side of the pond. But before she could point out the beaver to anyone else, it dived under and swam into its lodge.

"MINING" FOR SILVER

Our Mini-Quests were fun too. I picked Folklore for one Mini-Quest because I wanted to visit an old silver-mining town. The mine had been boarded up long ago so that people wouldn't go inside and

get hurt. But rocks that had been dug from the mine were still scattered around outside.

Our counselor showed us a rock that she said had silver in it. She called it silver ore.

Looks like an ordinary rock to me, I thought to myself. Then she broke it open with her rock pick. Inside it was shiny and dark gray. "A sure sign of silver," she said.

For the rest of the afternoon we had a contest to see who could find the most silver ore.

"Mining" was fun for us. But it must have been hard and very dangerous for miners a hundred years ago. They had to dig deep into the mountain to find the silver ore.

A REAL SURPRISE PARTY

Camp wasn't all Quests and Mini-Quests, though. We went bird watching, made crafts, and played games and sports. Some of us also plotted secret parties. . . .

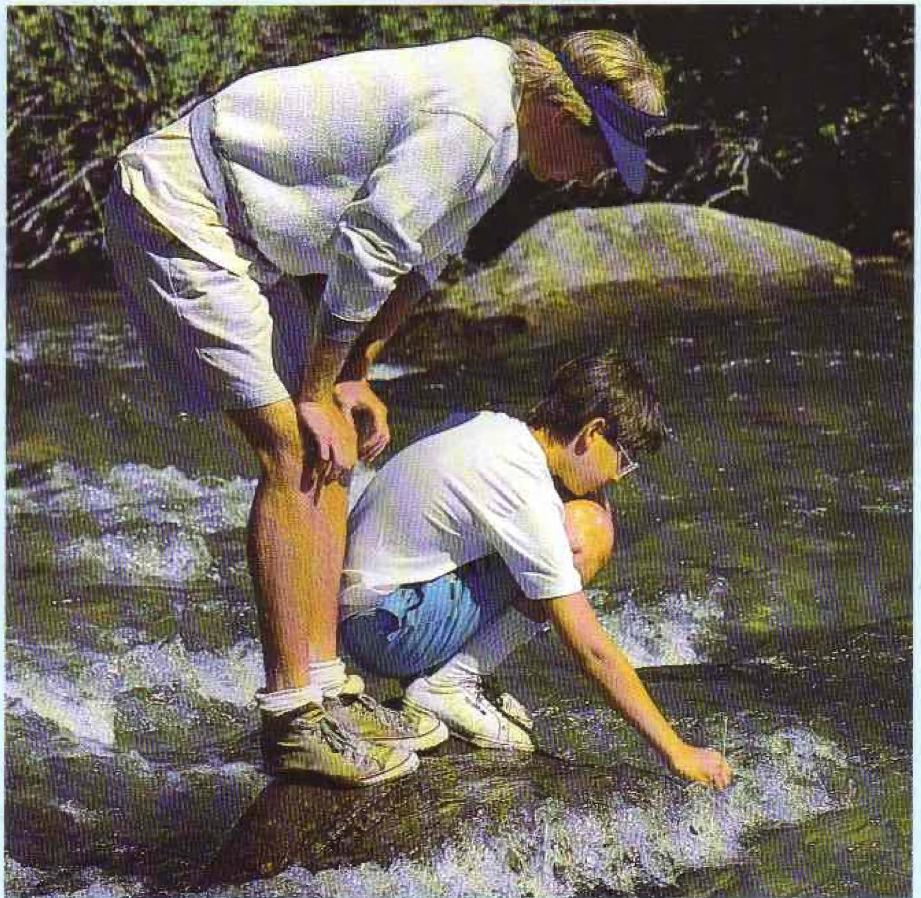
My cabin-mates and I had



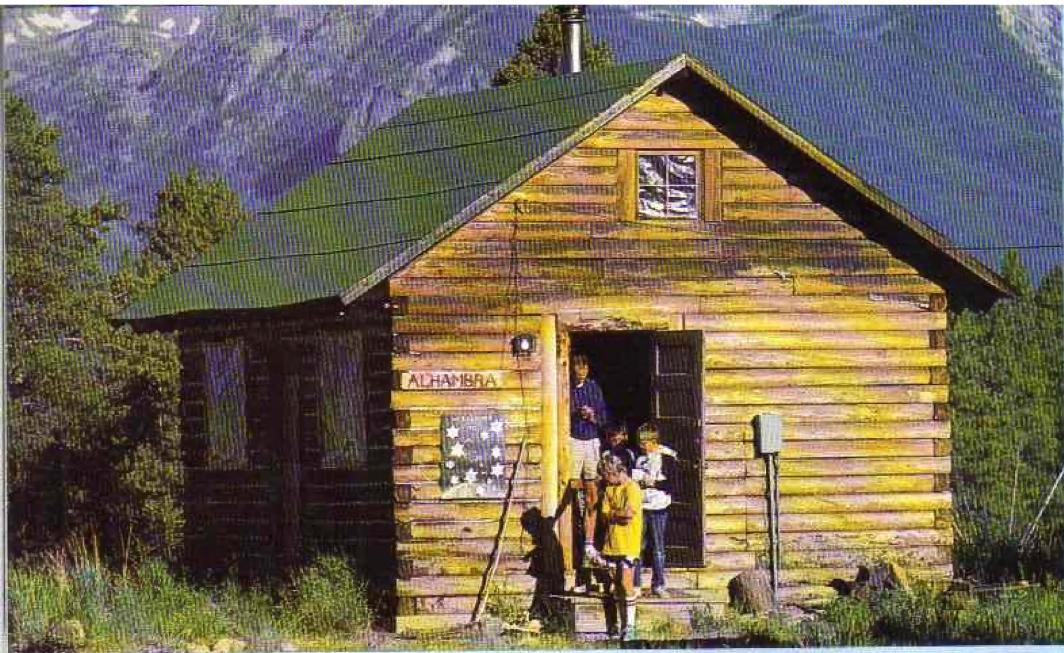
found out that both our cabin counselors had birthdays that week—*on the same day*. So we secretly made goofy cards for them. And we begged the camp cooks to bake two birthday cakes. On the big day, our counselors had no idea anything was up. They even took naps after lunch! As they snoozed, we silently decorated the cabin with streamers and a birthday banner. Then we all shouted, “Surprise!” We must have been the loudest alarm



Photo by Charles Krebs



You might spot a beaver (top) or wade in a pond to look for other animals (left). And you can take the temperature of a cold mountain river (above).



Everything at camp is neat: from hundred-year-old cabins (above) to the people—and raccoons—you can meet at the nightly programs (below).

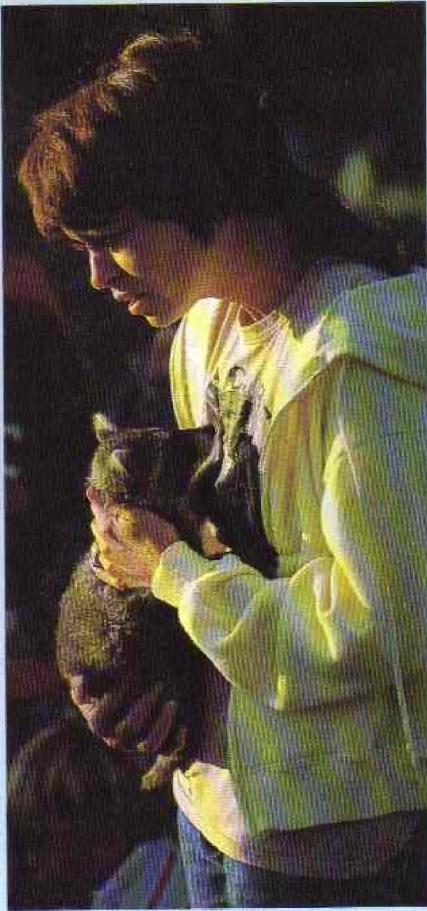
clock they ever heard!

I think the counselors had as much fun at camp as we did, especially at the evening programs. They taught us folk songs and mystery stories. They put on skits that poked fun at camp activities. (We howled when they imitated us trying to set up tents!)

My favorite night was when a woman trained to care for injured wildlife came to visit. She brought a raccoon for us to see (photo at right). The only raccoons I had ever seen were squashed on the road. It was great to see one alive!

CABIN CAMP-OUT

There was just one night when we didn't have an evening program. That was when



we went on an overnight camp-out. Each cabin group took a van to a different place way up in the mountains. Then we hiked for about a half hour to our campsite.

After we set up camp, we still had time for a hike before sunset. We looked for elk and mule deer as we walked, but didn't see any. We *did* see three porcupines waddling through the woods, though. I sure was glad their sharp quills were far from me!

That night I could hardly sleep. The Milky Way was so white and big that it looked as if I could reach up and touch it. And I saw at least seven shooting stars. (Whoops! I mean *meteors*—space rocks burning up as they fall to earth. That's something I learned in one of my Mini-Quests.)

Just two days later we were having our last campfire program. This time the campers put on some skits. My cabin group acted out the funniest part of our camp-out—trying to find places to sleep where we wouldn't slide downhill. From the way everybody laughed, they all must have had the same problem!

When the skits were done, we each got a photo of all the campers and counselors. As soon as I got home, I hung it on a wall in my bedroom. It's a great reminder of my vacation at one *wild* camp!

Who-o-o Knows?

I got a whole stack of neat sea questions from you kids. They started me thinking about sand, shells, and cool breezes. I decided that the sea was the place to be this summer. So here I am, writing to you—while I have fun in the sun.

Dear Wise Old Owl,

Do salmon really swim many miles back to the place where they were born?

Michelle Roberts; Birmingham, AL

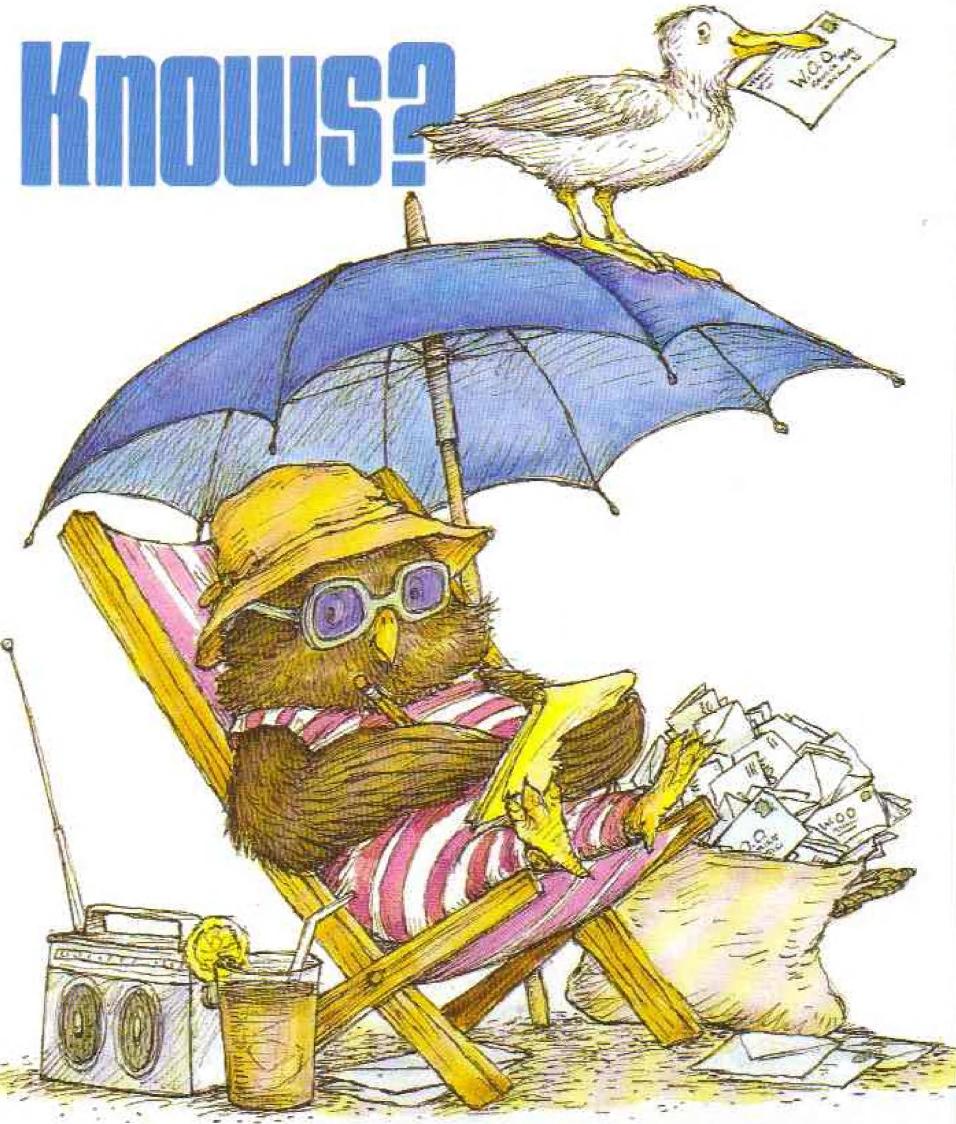
Salmon hatch in freshwater streams, Michelle. Most of them then swim downstream and spend part of their life in the ocean. When it's time to reproduce, the salmon return to the place where they hatched. Some salmon swim 2000 miles (3200 km) to get "home."

On their journey, salmon face many dangers. In Alaska, for example, many are caught and eaten by brown bears. (**See the front cover.**) A single bear may eat up to 90 pounds (40 kg) of fish in one day!

When is the best time to look for shells at the beach?

Emily Windle; Kingsport, TN

Low tide is a good time to find shells, Emily. That's when you can spot the shells that were



covered by water during high tide. But the very best time to find shells is after a storm. Big waves wash lots of shells up on the beach.

What is the biggest turtle in the world?

Matthew Grennell
Kesabe, Kenya, East Africa

The leatherback sea turtle is the largest, Matthew. It can grow to be nearly 6 feet (2 m) long from the tip of its nose to the tip of its tail. A leatherback

turtle may weigh as much as a large horse.

Is it true that starfish have eyes on their arms?

Jeff Anderson; Lansing, IL

A starfish has an eyespot on each arm. The eyespots don't see shapes or colors the way your eyes do. But they can tell light from dark. If a hungry fish or other predator swims above a starfish, the starfish sees the predator's shadow and knows danger is near.

(Continued on next page)



Do fish have ears?

Kimberly Adams; Barboursville, WV

Fish don't have outer ears the way you do, Kimberly. But they do have an *inner ear* inside each side of the head. The inner ear has no opening to the outside and no eardrum. A fish hears by picking up sounds that come through its skull.

I read the article about quahogs (KO-hogs), or hard-shelled clams, in your August 1987 issue. Now I want to know: How do quahogs give birth?

Kathryn Starnella; Sheboygan, WI

Clams don't really "give birth," Kathryn. Instead, a female clam releases millions of eggs into the water. About the same time, a male clam releases millions of sperm nearby. Some of the sperm enter some of the eggs and fertilize them. These fertilized eggs hatch to become clam *larvae*, which are so

small you'd need a microscope to see them. The larvae swim around in the water for two to three weeks. Then they settle down in the sand and change into tiny clams.

What is the fastest fish?

Brian Fedderson; Salt Lake City, UT

Most scientists think the sailfish is the fastest, Brian. This fish can swim 68 miles (109 km) per hour. That's about as fast as a cheetah can run, and the cheetah is the fastest runner on earth!

How long can a dolphin hold its breath underwater?

Marcus Mead; Ionia, MI

Usually a dolphin swims just under the surface of the water, coming up to breathe every 15–20 seconds. But sometimes a hungry dolphin will dive deep to catch a squid or fish to eat. Then the dolphin may have to

hold its breath for as long as eight minutes.

Do sharks get cavities?

Jason Stonerook; Clarence, IA

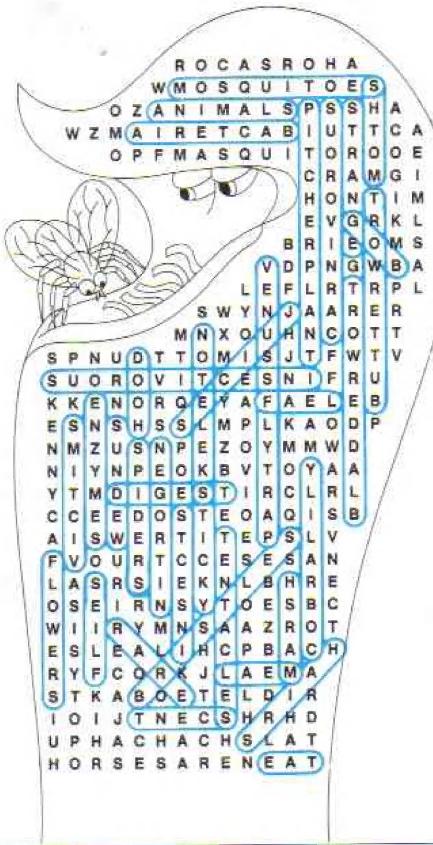
No, they don't, Jason. Sharks don't keep their teeth long enough for cavities to form.

A shark's teeth are attached to its jaws in 6 to 40 rows, depending on the kind of shark. When a shark attacks its prey, it often loses some of the teeth in the front row. But no problem—the teeth behind them move up to take the place of ones that were lost.

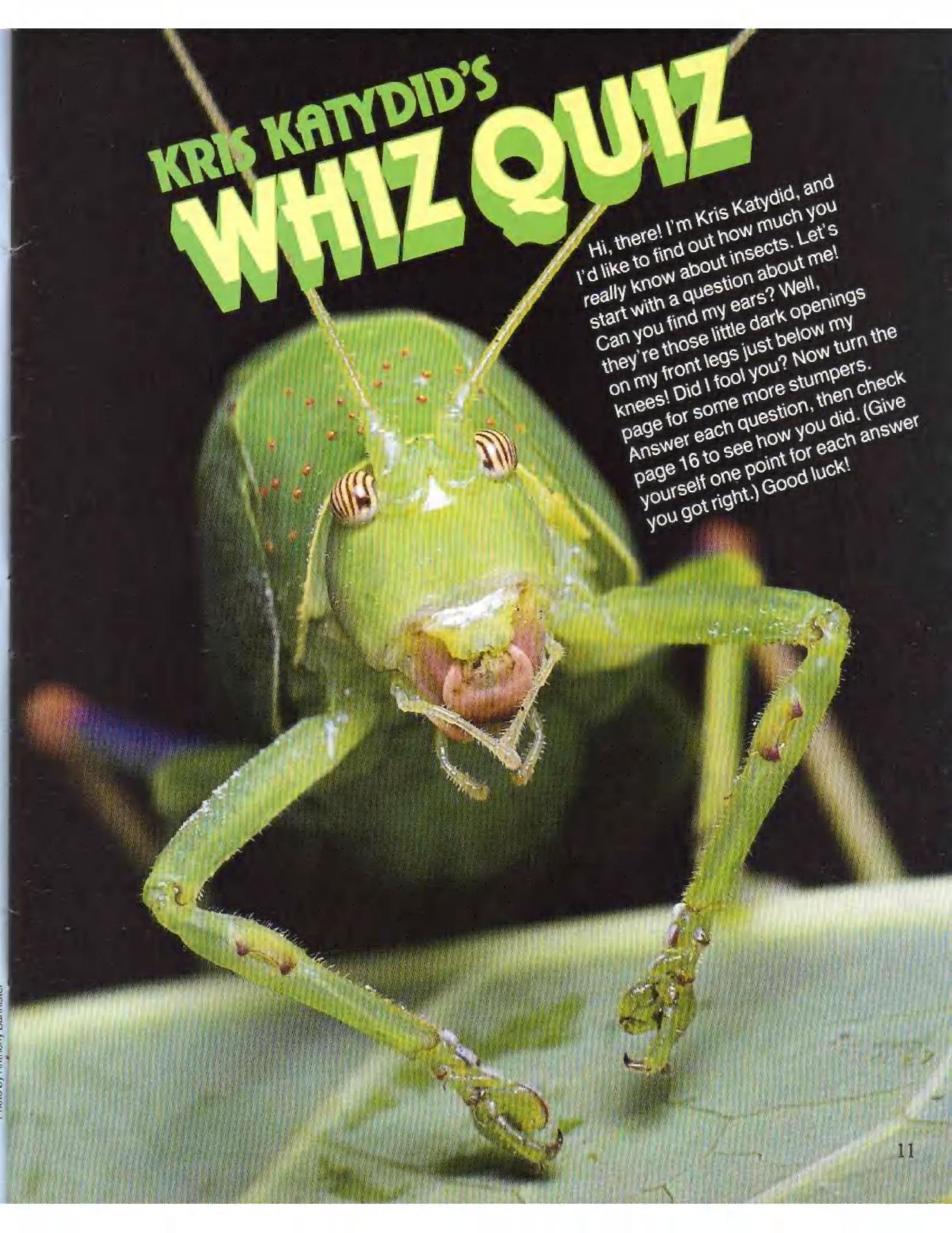
Some sharks may grow 30,000 teeth in a lifetime!

W.O.O.

Answers to Catchy Word Find, page 21:

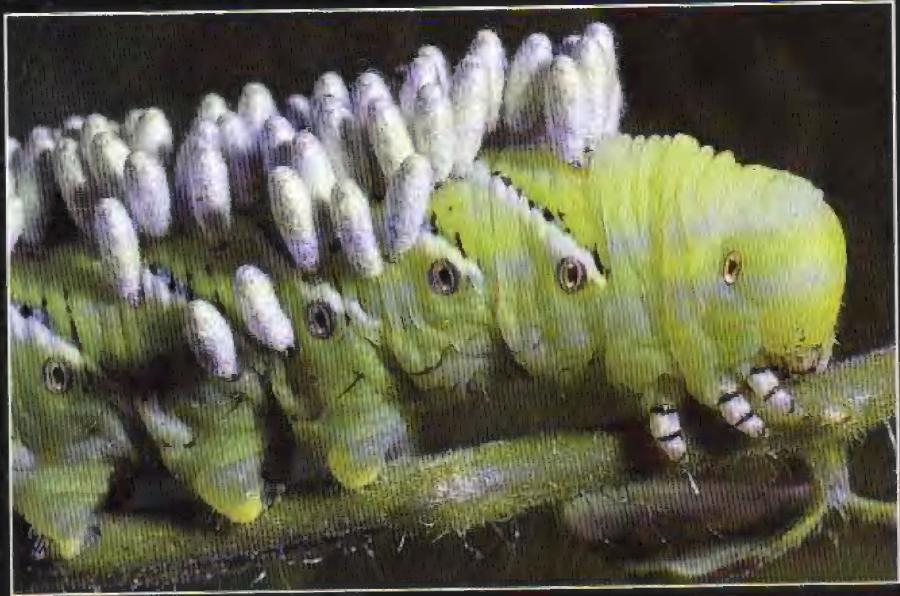


KRIS KATYDID'S WHIZ QUIZ



Hi, there! I'm Kris Katydid, and I'd like to find out how much you really know about insects. Let's start with a question about me! Can you find my ears? Well, they're those little dark openings on my front legs just below my knees! Did I fool you? Now turn the page for some more stumpers. Answer each question, then check page 16 to see how you did. (Give yourself one point for each answer you got right.) Good luck!

1 What are the white things on this caterpillar's back?



2 How does a male luna moth find a mate in the dark?

3 What's about to happen here?



Photos by James H. Robinson; Gail Shumway (2,5); Jeff Lepore; Ray Elliott Jr.



4 Name this milk-weed eater.



5 What's this?

6 Name this little "lion's" favorite food.



7 What's this butterfly doing?

8 Why is this wasp stinging a tree?





9 Which sucks the most blood—
a male mosquito or a female?

Photos by Rod Planck (6, 7, 9), Gregory K. Scott; Gary Messaris



10 What kind of insect is this?

WHIZ QUIZ ANSWERS

1. Those white things are *braconid* (brah-CON-id) wasp cocoons. And here's how they ended up on the caterpillar's back: A female wasp jabbed her egg-laying tube through the caterpillar's skin and laid her eggs inside the caterpillar's body. When the eggs hatched, the wasp's *larvae*, or young, started eating the caterpillar's insides. Then the wasp larvae chewed through the caterpillar's skin and spun cocoons on its back. The young wasps inside the cocoons will soon come out as adult wasps, and the caterpillar will die.

2. A female luna moth gives off a powerful chemical scent. The male can "smell" this scent with the feathery antennae on his head and then fly to the female.

3. An assassin bug is about to kill a *swallowtail butterfly caterpillar*. The bug will use its hollow "beak" to stab the caterpillar and then suck out its body juices.

By the way, those "eyes" on the caterpillar aren't real eyes. They're just spots on its back that look like eyes. The caterpillar's real eyes are on its head and are much smaller than the fake ones.

4. This is a *milkweed beetle*. A few other types of insects also feed on milkweed, including milkweed bugs and monarch butterfly caterpillars. Milkweed contains a bitter-tasting chemical. This chemical makes these milkweed-eaters taste terrible to many animals that might want to eat them.

5. This odd-shaped green object is a butterfly *chrysalis* (KRISS-sa-liss). Inside the chrysalis, a caterpillar is changing into a butterfly.

6. Ants are the favorite food of this insect, but any small creature will do. This "lion" is the larva of an insect called an *antlion*. This larva digs a pit in very fine sand or soil and lies buried at the bottom of the pit. Here it waits for an ant or other tiny creature to fall in. When a creature tumbles into the trap, the antlion grabs it with its strong jaws before it can escape.

7. This butterfly is sipping moisture from the ground through its long, strawlike *proboscis* (pro-BOS-sis).

8. This female *thalassa wasp* is not stinging the tree. Instead she has found the lar-

va of a wood wasp living inside the wood. And now she has pushed her long, black egg-laying tube through the wood and into the larva's tunnel. There she will lay her egg. When her young hatches, it will crawl to the wood wasp larva and eat it.

9. A female mosquito sucks the most blood. In fact, the male does not suck blood at all. It sips plant nectar.

10. This creature is not an insect. It's a fishing spider, which has just caught a minnow for dinner. (Remember—insects have six legs, and spiders have eight.) ☺

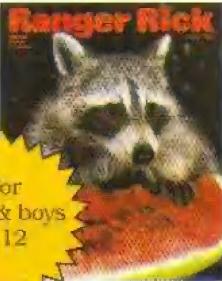
Kris Katydid's Score Box

10 Points: Insect Know-It-All
(You're quite a whiz! Are you sure you don't have six legs?)

7-9 Points:
Insect Semi-Genius
(Good—for a human, that is.)

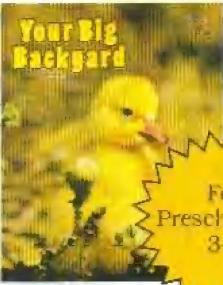
4-6 Points:
Insect Know-a-Little
(Missed a few of those tricky ones, didn't you? Maybe you should spend a little more time with your six-legged friends.)

3 or Fewer Points:
Better Luck Next Time
(Don't feel bad. I probably wouldn't do too well on a tough quiz about humans!) ☺



RANGER RICK & YOUR BIG BACKYARD Order Form

070808



(Please print)

Your Name _____

For
girls & boys
6-12

Address _____

City _____

Apt. # _____

State _____ Zip _____

For
Preschoolers
3-5Please send the gift checked below to:
(If order is for yourself, write "same" below.)

Child's Name _____ Year of Birth _____

Address _____ Apt. # _____

City _____ State _____ Zip _____

- ages 6-12 · **RANGER RICK**, 12 issues \$14.00
 ages 3-5 · **YOUR BIG BACKYARD**, 12 issues \$10.00

Please send the gift checked below to:

Child's Name _____ Year of Birth _____

Address _____ Apt. # _____

City _____ State _____ Zip _____

- ages 6-12 · **RANGER RICK**, 12 issues \$14.00
 ages 3-5 · **YOUR BIG BACKYARD**, 12 issues \$10.00

Additional Gifts? Attach your list.

You'll be sent gift cards to sign and forward.



Make check payable to and send to:

NATIONAL WILDLIFE FEDERATION
1412 Sixteenth St. N.W., Washington, D.C. 20036-2266
Allow 4-6 weeks for delivery.For renewal orders, please affix magazine mailing label.
Add \$8.00 for each address outside the U.S. Please pay by check on U.S. bank or by International Postal Money Order. Total enclosed Bill me

Adult Signature _____

Make reading a treat and learning an adventure with these two exciting magazines kids love!

For children 6-12, **RANGER RICK**® encourages a love of reading with subjects kids like most—animals, wildlife adventures and stories about other children.
 12 monthly issues, plus Ranger Rick Nature Club membership.

\$14.00

For preschoolers 3-5, **YOUR BIG BACKYARD**® expands a child's awareness of the world, builds pre-reading skills and gives hours of fun and surprises.

12 monthly issues, each with a Parent-Teacher Activity Letter.

\$10.00**Help young minds grow!**



No Rest at the Nest

The middle of a shallow lake in Israel may seem like a peaceful place for a nest. But these *black-winged stilts* still have their problems!

TROUBLES WITH TURTLES

Troubles come in twos for this black-winged stilt. A couple of turtles start doing what turtles like to do on a sunny morning. They crawl up out of the water to take a sunbath on the stilt's nest (**photo above**).

But is sunbathing *all* the turtles want to do? The bird's eggs are hatching. Will her young be safe from the turtles?

It's time for this worried mother to stand up and defend her young (**right**). You can never trust a creature that's nosing around your nest!



MOVE IT, MATE!

Across the lake, another female stilt has troubles of her own. She has returned to the nest with wet feathers to cool her eggs on this hot day. All she wants to do is take her turn sitting on them. She flutters down to the nest so her mate can leave. But does he leave? No! Maybe he isn't hungry enough to leave, or perhaps he just *likes* the job of egg sitting. Whatever the reason, he's not about to go.

The female gives him a nudge to remind him that it's her turn (**top right**). But he doesn't take the hint. So the best she can do is settle down next to him (**bottom right**). At least she's taking her turn on the nest, even if she can't get near the eggs!



Photos by Yossi Eshbol



STILL MORE STILT STUFF

- Black-winged stilts are about as tall as this page. Stilts' legs are very long compared to their body size. Only flamingoes have longer legs than stilts compared to the size of their bodies.
- Because of their extra-long legs, stilts can search for insects and other little water creatures where birds with shorter legs can't.
- Black-winged stilts live in Africa, Europe, and Asia. Their close cousins, the black-necked stilts, live in North and South America.
- Stilts often build their nests on land, close to the water's edge. If a nest gets flooded, the stilts pile up plants and mud until the nest reaches above the water's surface.
- Stilt chicks are ready to run around the nest (**top left**) and wade in the shallow water the day after they hatch. But that doesn't mean their parents will go off and leave them. This father (**bottom left**) helps keep his chicks out of trouble for a whole month before they're ready to live on their own.

—Claire Miller



Catchy Word Find

by Gerry Bishop and Sally Ann Coggins

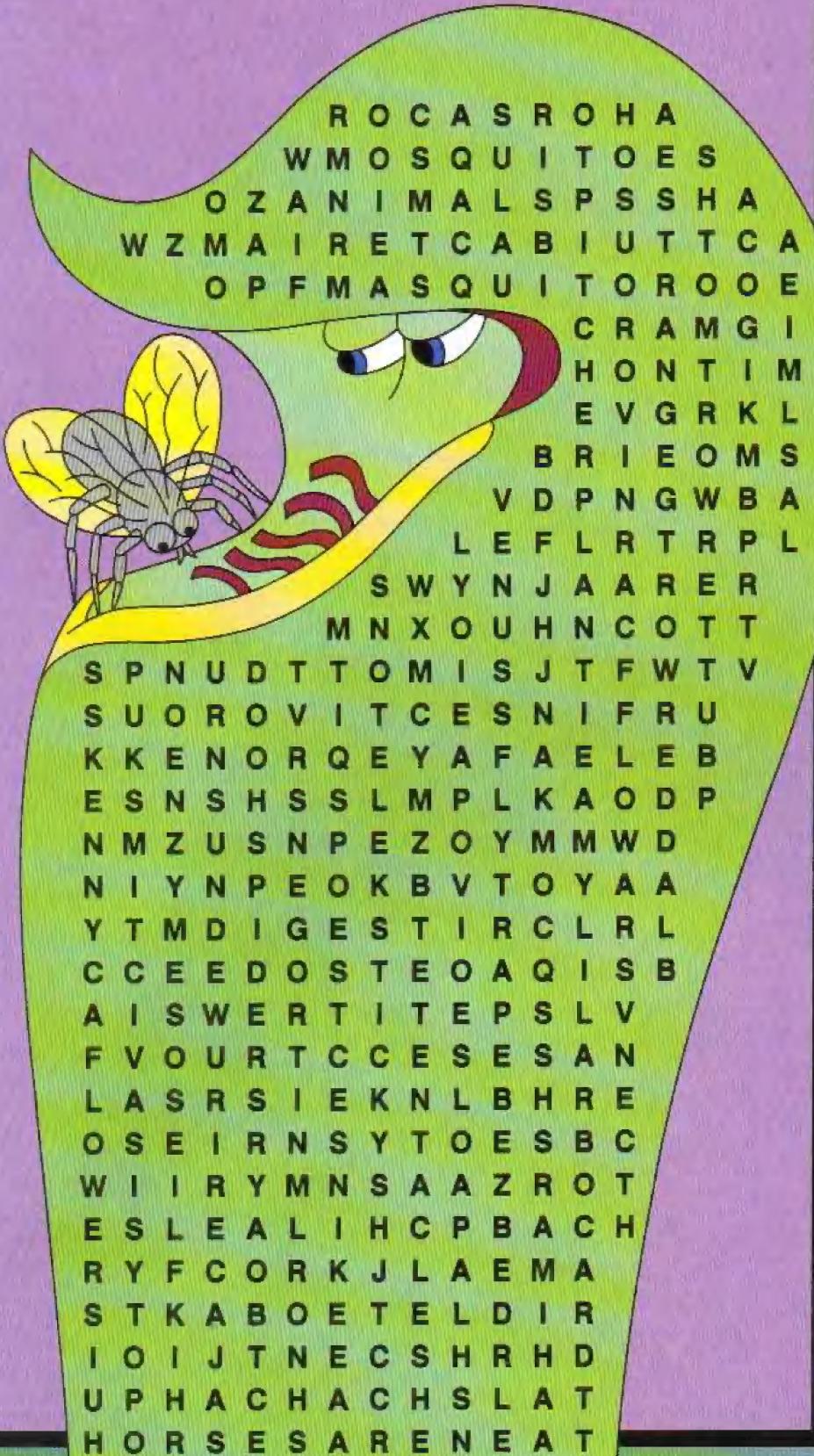
In the paragraphs below, there's a lot of information about plants that catch and eat animals. First read the paragraphs. Then see if you can find the words in white hidden in the tricky pitcher plant at right:

The **pitcher plant**, **Venus's flytrap**, **butterwort**, **cobra lily**, **sundew**, and **bladderwort** are just a few kinds of **carnivorous**, or meat-eating, plants. These **strange** and sometimes **rare** plants are also called **insectivorous**, because they capture and **eat insects** such as **flies**, **mosquitoes**, and **moths**. But they also may make a **meal** of other small **animals**, such as **spiders**.

Some carnivorous plants capture their **victims** with **sticky tentacles**. Others use a **scent** to lure prey inside a **leaf** shaped like a **hood**. There the prey may get caught on **hairs** or **bristles**.

These plants usually live in a **bog** or **marsh** or other wet place where the soil is poor in **nitrogen**. To get the nitrogen they need in order to grow, they eat insects. The plants use **enzymes** or **bacteria** to **digest** their prey. Soon nothing is left inside the plant but the insect's outer **skeleton** and its nitrogen-rich body **juices**. The plants use these juices as food so they can produce **flowers** and other plant parts.

Answers on page 10



Can you catch flies?

by Rhonda Lucas Donald

A real pitcher plant catches lots of flies (see page 21). If you follow these directions, you can make your own pitcher plant. Then you can see if you can catch flies too.

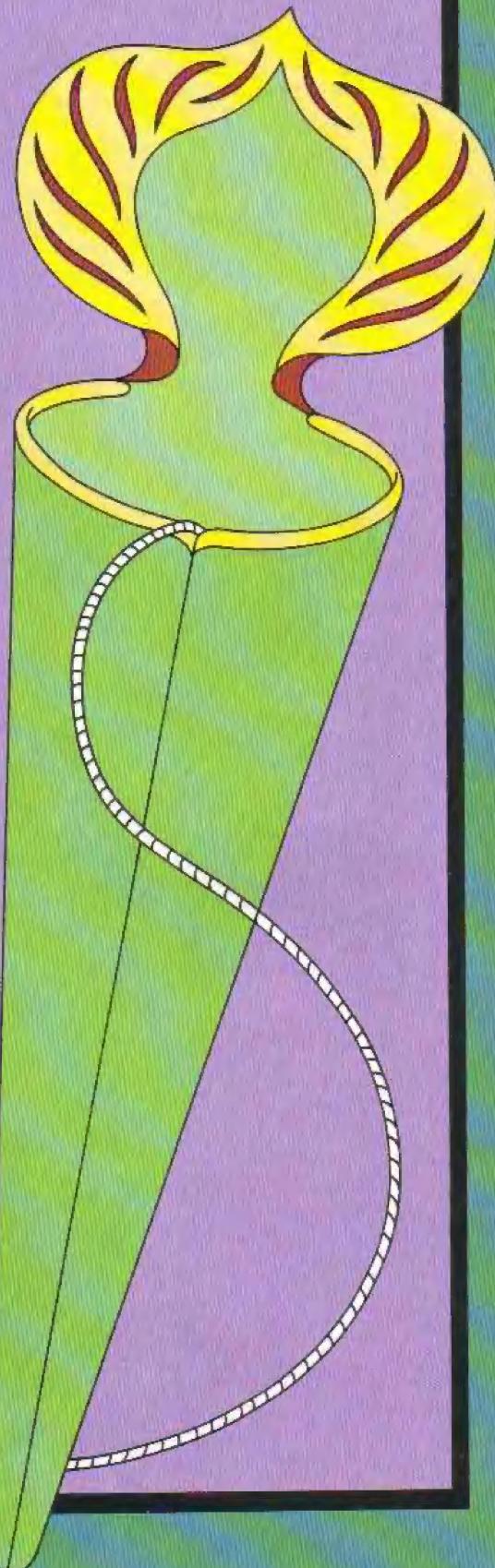
What you need:

- very thin cardboard (about the thickness of a manila folder) $6 \times 9"$ (15×23 cm)
- 11" (28 cm) piece of string
- scissors
- two strips of white paper, each $\frac{3}{4} \times 4"$ (2×10 cm)
- pen or pencil
- white glue
- tape
- crayons, markers, or paints and paint brushes

cut slits in paper

What you do:

1. Trace the pitcher plant pattern shown at far right onto a piece of thin cardboard and cut it out.
2. Color one side of the cut-out to look like the inside of the plant (right). Color the outside bright green.
3. To make the hairs that line the insides of pitcher plants, fold the strips of white paper in half lengthwise. Cut slits in one half of each strip (see drawing A).
4. Apply a line of glue to the uncut side of each strip and carefully glue the "hairs" to the inside of the plant (see pattern). Make sure that the hairs point down toward the bottom.
5. Roll the cut-out pitcher plant into a cone shape (see



drawing B). Tape or glue the edges of the cone together.

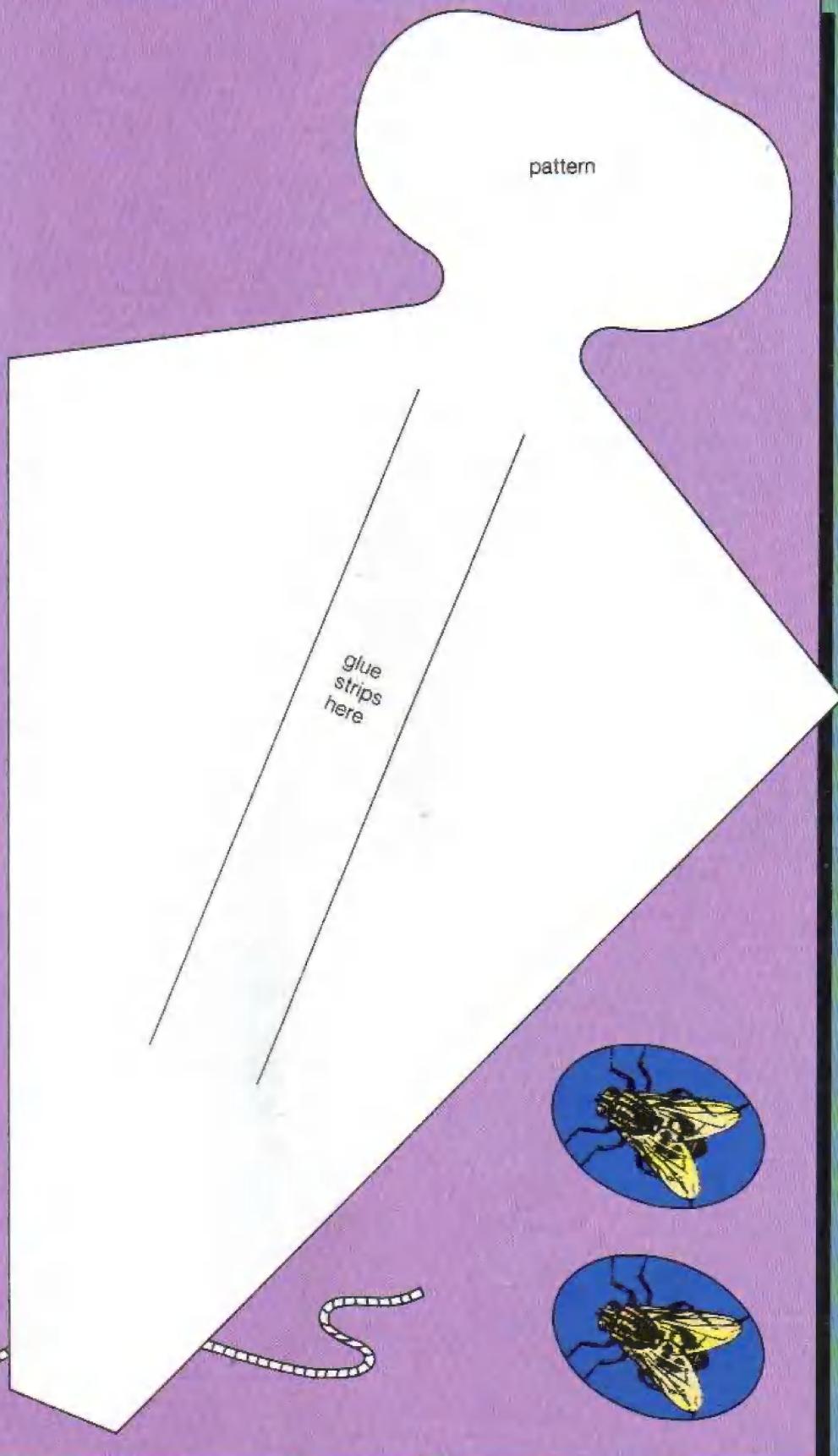
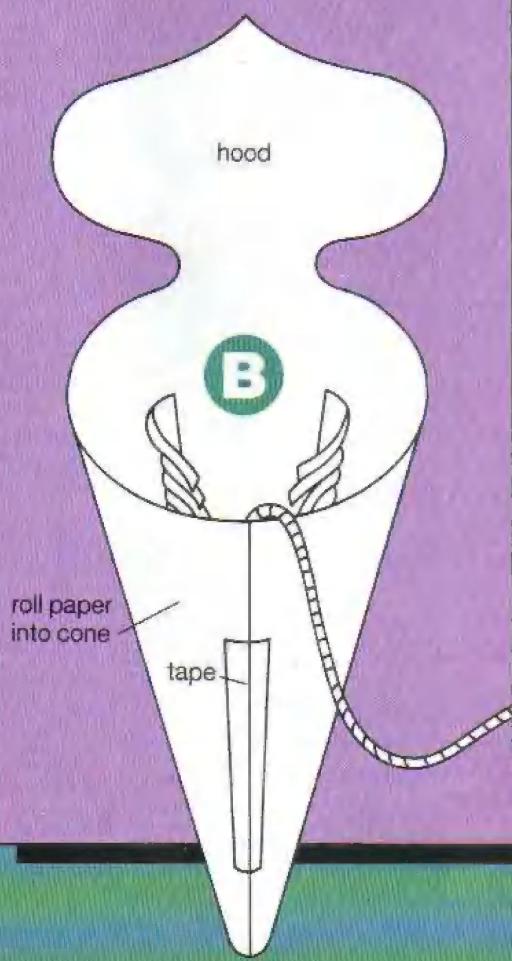
6. Glue one end of the string to the inside front lip of the pitcher plant (see drawing B).

7. On two egg-shaped pieces of cardboard, draw flies like the ones below right.

8. Glue the flies back to back onto the loose end of the string. Let dry.

9. Curl the plant's "hood" down toward the cone's opening by rolling it around your finger. Hold it in place for a couple of seconds.

10. Now your pitcher plant is ready to catch flies! Just flip the fly up and try to get it into the pitcher. Will your pitcher plant catch its dinner? ☺



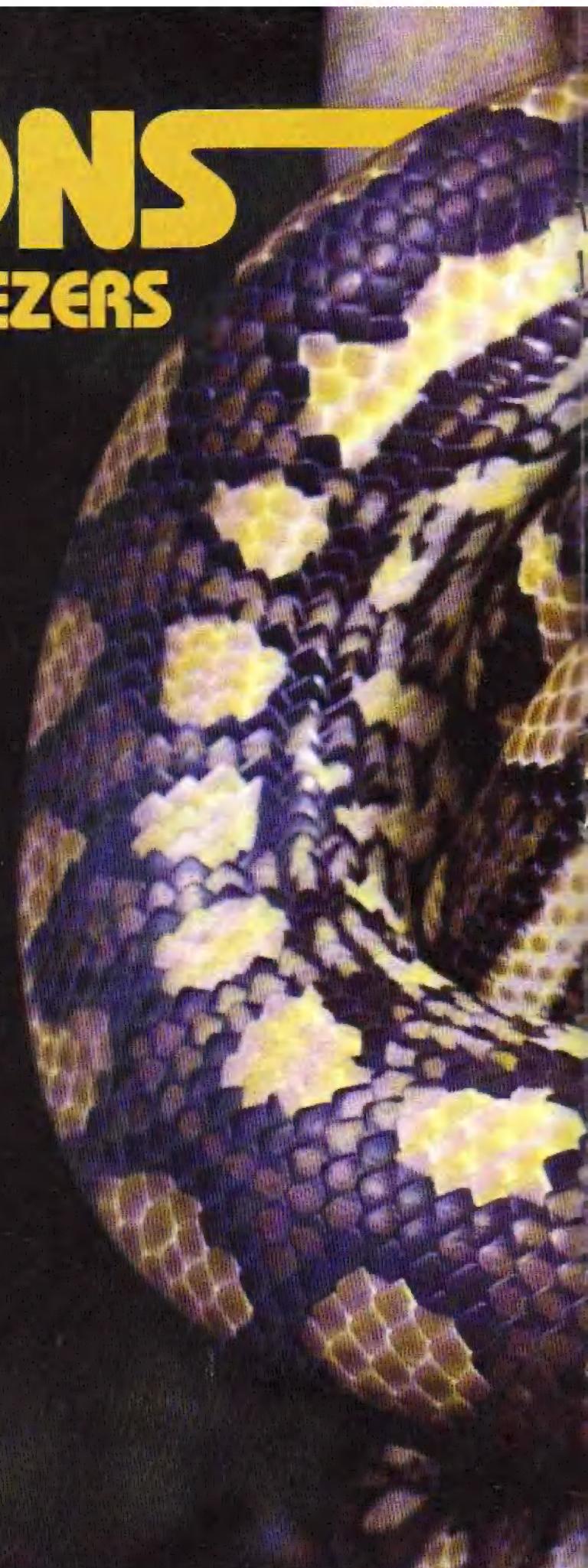
PYTHONS THE BIG SQUEEZERS

by Diane Swanson

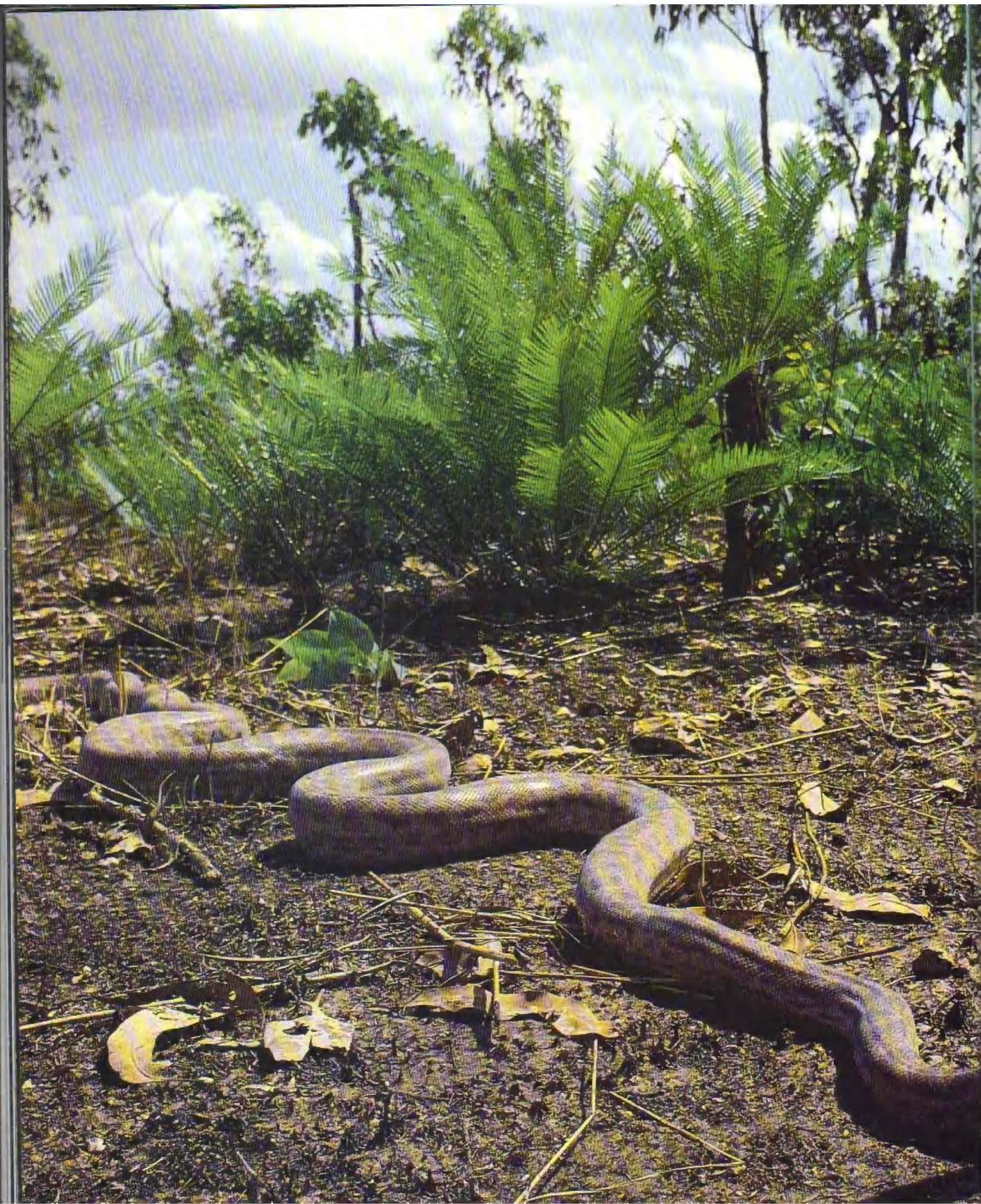
Have you ever made a list of animals that really scare you? If so, you might have put pythons right near the top. What about a list of animals you think are "neat"? Pythons may have been on that list too.

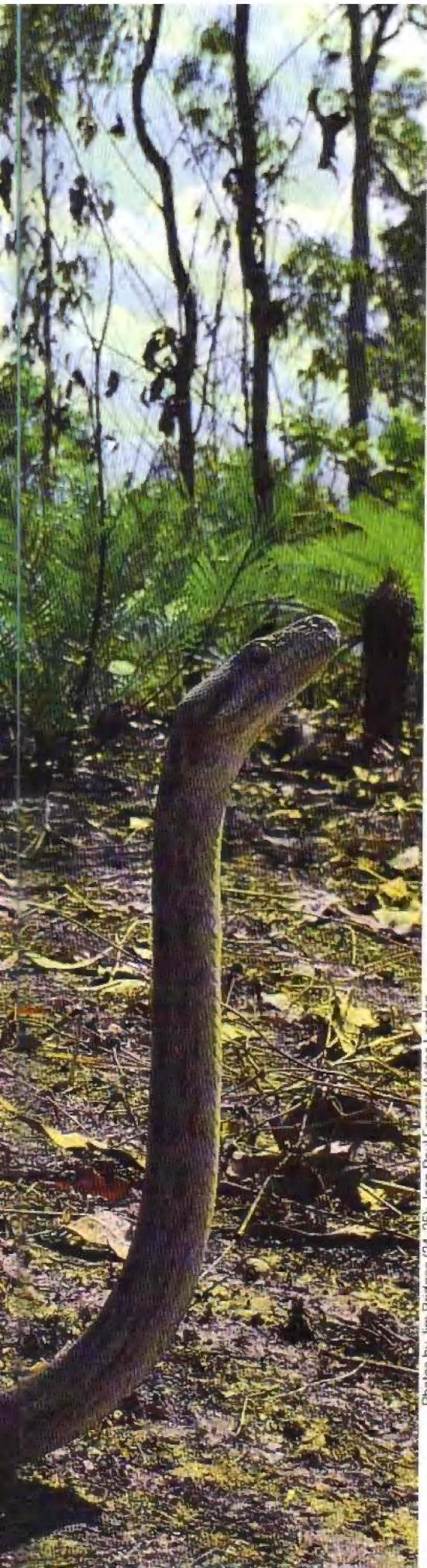
About 20 species, or kinds, of pythons live in the tropics of Africa, Asia, Australia, and a few Pacific islands. (The one at right is a *carpet python* from Australia.) Most pythons are large and some are very large. And they're famous for wrapping coils of their body around their prey, then squeezing it to death. So people have always paid a lot of attention to pythons. Some have feared them, some have worshiped them, and many have told tales about them.

Here are just a few of the many stories and legends that people have told down through the centuries about pythons. And after each set of stories we give you the facts about these amazing snakes.



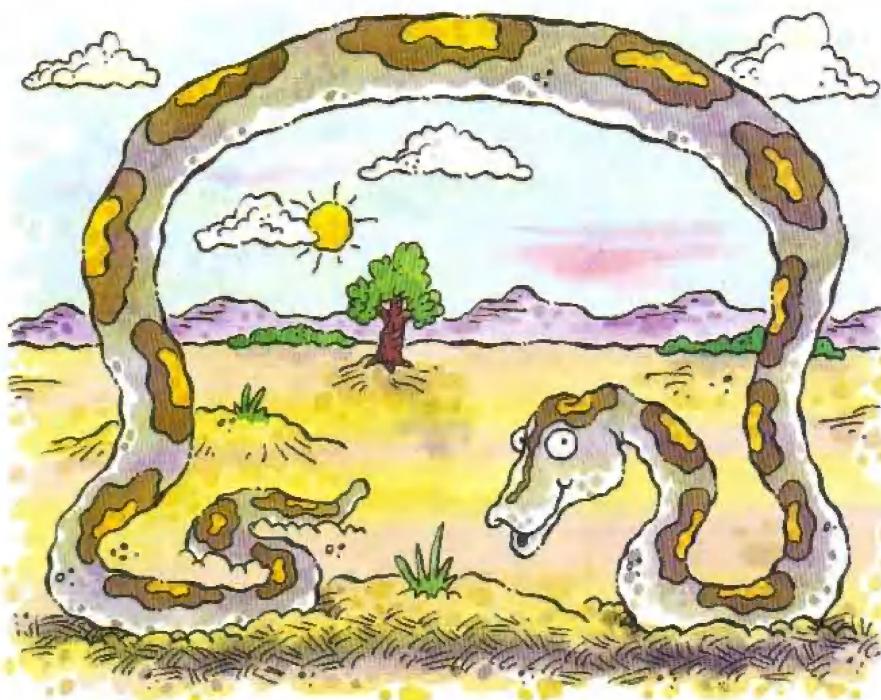






Photos by Jim Bridges (24, 25), Jean-Paul Ferney/Aldeia London

Drawings by Terry Sirrell



SUPER-SIZED PYTHONS?

In Australia, natives told stories about a python so huge that it stretched across the sky like a rainbow. They believed that the giant python marked out the pathways for rivers and guarded all streams.

In ancient Greece, soldiers returning from battles in India shocked people with fantastic stories of pythons. They said the snakes were so large that their eyes were the size of soldiers' shields.

The Facts: Some species of python are real-life giants—they're among the longest of any animals living today. The record holder is the *reticulated* (ruh-TIK-yuh-lay-tid) python of Southeast Asia. (See photo

on page 29.) It can be as long as a school bus—about 30 feet, or 9 meters. *Indian pythons* and *African rock pythons* may grow to a length of 26 feet (8 m). And a python from Australia, called the *oenpelli* (een-PELL-ee) and shown in the photo at left, reaches over 13 feet (4 m).

But other species of python aren't very long at all. A few grow to be only about 5 feet (1.5 m) long. And one from Australia, called the *children's python*, may be only 3 feet (1 m).

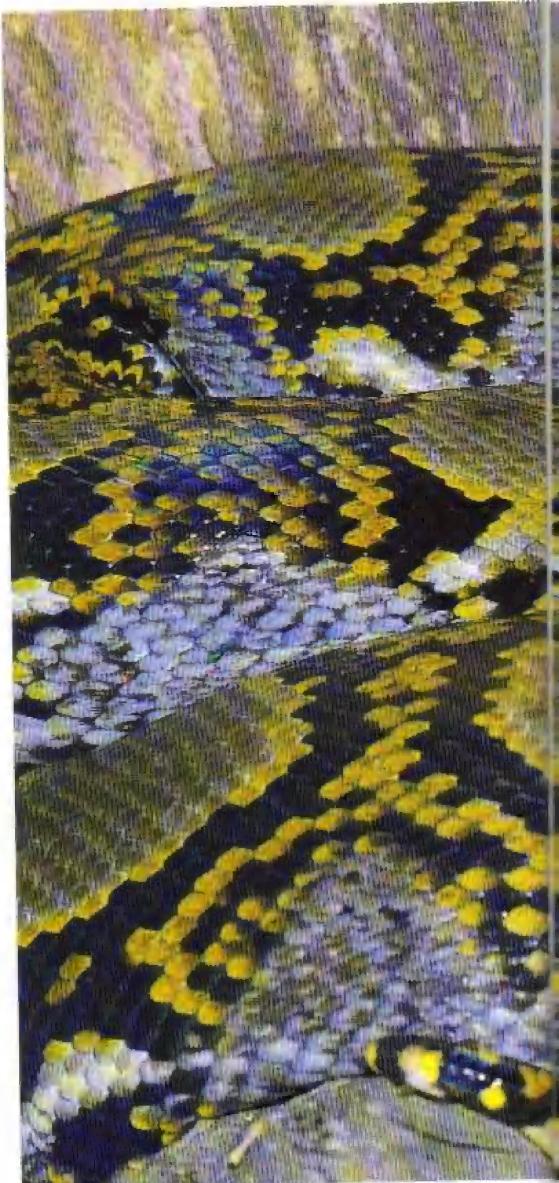
Scientists think that some ancient pythons took the grand prize for size. In Egypt, scientists found the 50-million-year-old fossil of a python that may have been 50 feet (15 m) long.



PYTHONS IN COATS?



Photos by Michael McCoy/Photo Researchers; Ken Lucas/Planet Earth; Fritz Prenzel/Animals Animals



From Southeast Asia comes a story about how the python got its colorful skin. According to this legend, the first python in the world was plain white. One day he fell in love with a woodcutter's wife, and the two ran away and got married. Later the wife made the python a beautiful coat with several colors. He was so pleased he wore it forever. So



to this day, the story goes, pythons wear beautiful coats.

The Facts: Real pythons don't wear coats, of course. But they do have scale-covered skin with beautiful patterns and colors. The reticulated python (**above**) has a shiny black, net-like pattern down the length of its body. (The word *reticulate* means "like a net.") The

amethystine (am-uh-THISS-tin) python has yellow-brown skin that gives off a purple sheen. (Amethyst is a purple mineral.) And the green tree python has the most amazing "coat" of all. As the snake grows, it changes color from yellow or red-brown to green! (**See the two photos at left.**)

Every so often, pythons shed the thin, outer layer of

their skin—just as all snakes do. When it's shedding time, the old skin looks dull and colorless. The snake starts rubbing its nose against a rock or tree trunk or anything rough. The old skin begins to peel from the head like a sock being pulled off a foot. The snake then snags the loose skin on a branch or sharp rock and wriggles completely out of it.

ELEPHANT-EATING PYTHONS?

Greek soldiers once told stories about pythons that could eat an ox or a large deer in a single gulp. The ancient Chinese wrote about a giant "Pa Snake" that could eat a whole elephant. The Pa Snake, they said, took three years to digest the elephant. Then it threw up the bones.



The Facts: A large python sometimes may attack an animal the size of a deer or a pig. (The photo **above** shows an Indian python eating an adult hog deer.) The python spends hours swallowing the



prey, often stopping to rest. And that one meal may last for months. But no python can eat an elephant. In fact, most pythons—even the biggest ones—usually eat birds and small mammals such as rats (**right**). People in some parts of the world have even kept pythons in warehouses and the holds of ships to help get rid of rats and mice.



Photos by McDougal-Tiger Tops/Ardea London; Bruce Davidson/Animals Animals

To catch its prey, a python strikes fast and grabs with its long sharp teeth. Quickly it wraps coils of its body around the victim. Then it squeezes tighter and tighter until the prey cannot breathe.

After the prey has died, the python grips the animal's head with its teeth. Then it works its jaws around its victim and swallows it whole.



PYTHONS ATTACKING PEOPLE?



About 2000 years ago, Roman soldiers in Africa reported seeing a snake 120 feet (37 m) long that had killed hundreds of men. They said they finally managed to kill the snake with big rocks. Later, the leader of the army was honored for his great victory.

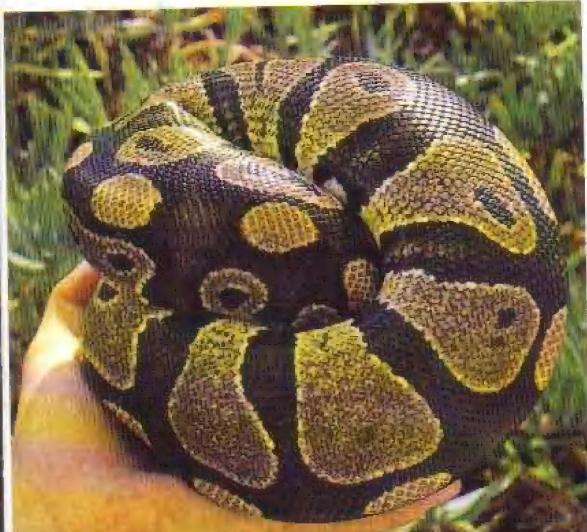
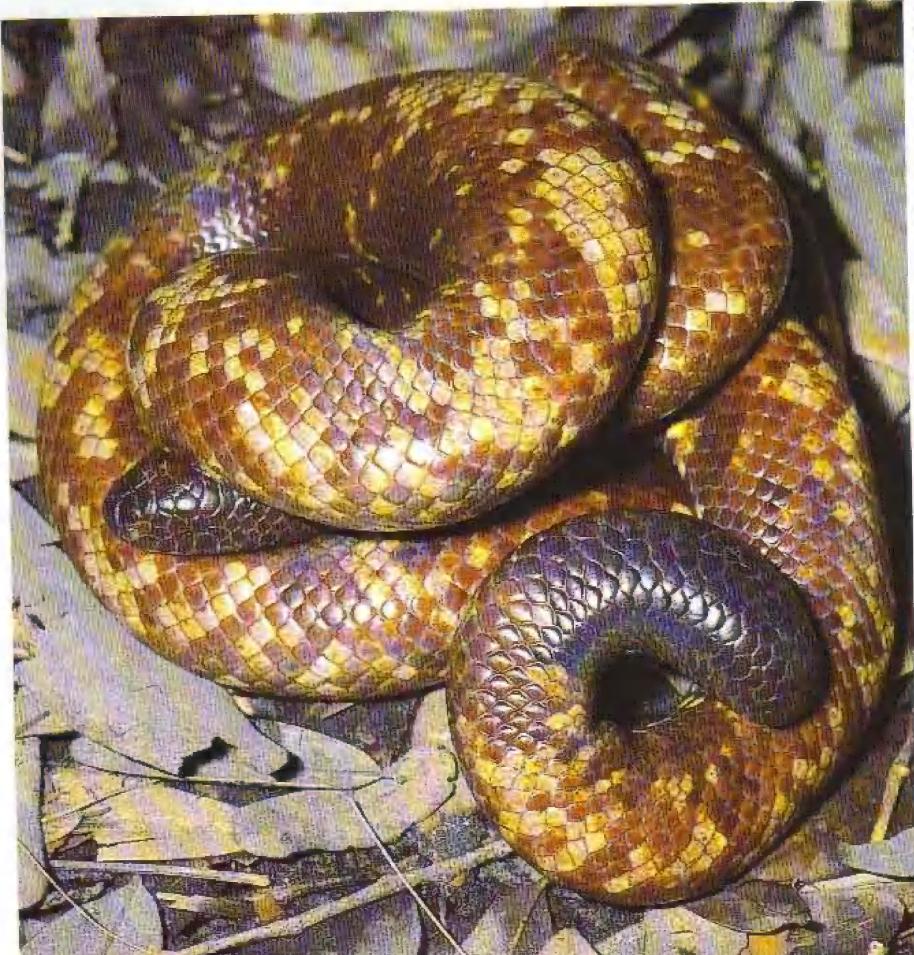
The Facts: Many stories tell of attacks on people by huge pythons. But in real life, pythons rarely do anyone any harm. And when they do, it's almost always to defend themselves, not to get a meal.

Much more often, people harm pythons. They kill the snakes for their meat and beautiful skin, which they make into purses, shoes, belts, and other products. And by cutting down forests and building roads and cities, they leave pythons with fewer wild places in which to live.

People aren't the only enemies of pythons. Many predators will try to kill and eat small pythons. And crocodiles, leopards, and tigers may attack all but the largest ones.

If threatened by enemies, pythons usually try to crawl away and hide. Pythons can disappear into surprisingly small holes and cracks! But if that doesn't work, they may hiss and strike to scare their enemies away.

To protect itself from harm, a *ball python* (**below left**) may curl into a ball with its head tucked inside. The small *two-headed python* (**below**) has a tail that looks a lot like its head. The snake may try to protect itself by moving its tail back and forth like a head. Meanwhile, it keeps its true head tucked away between the coils of its body. If an enemy attacks, the snake's tail may be injured, but its head most likely will be safe.



Photos by Ken Lucas/Planet Earth; Karl H. Switak

SUPERNATURAL PYTHONS?

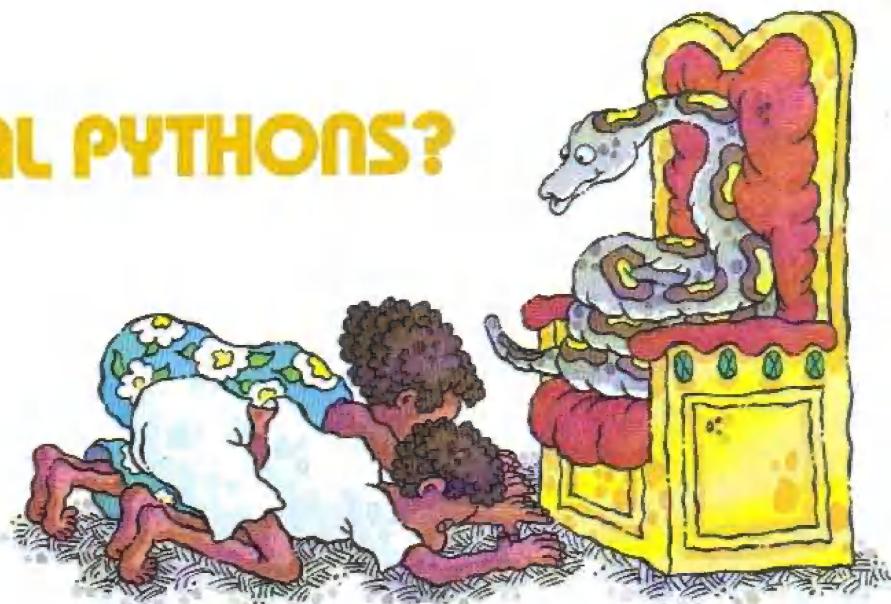
People in Africa have worshiped the python as a god of war or a god of wisdom and happiness. Some couples planning to get married would come to a captive python for a blessing. Pythons were also thought to bring good crops.

In one legend, a python was present at the birth of the parents of mankind. The people were born blind, but the python touched their eyes and gave them sight.

Some people in Africa treat female pythons like gods when the snakes are with their eggs. They even bring the snakes offerings such as coffee beans and pretty shells.

The Facts: Pythons aren't godlike, of course. But the females are just about the best snake mothers on earth. Unlike most snakes, a female python stays with her eggs until they hatch. She lays her eggs in a shallow nest, coils her body around them, and rests her head on top (**right**). There she stays, on guard, for about two months. She may leave the nest to drink, but she hurries right back again.

The Indian python goes one step further. She warms her eggs by shivering! Shivering makes muscles work harder, and that creates extra body



heat. The warmth can help keep her eggs at just the right temperature.

Pythons are special in other ways too. For example, most pythons would make great athletes. Some can climb trees with ease and hang by their strong tails. Most are very fast

for their size. And many are super swimmers. Pythons have been known to swim over 30 miles (50 km) from one island in the Pacific Ocean to another.

So after all of this it should be plain to see: Pythons may not be supernatural, but they are naturally super! ☺

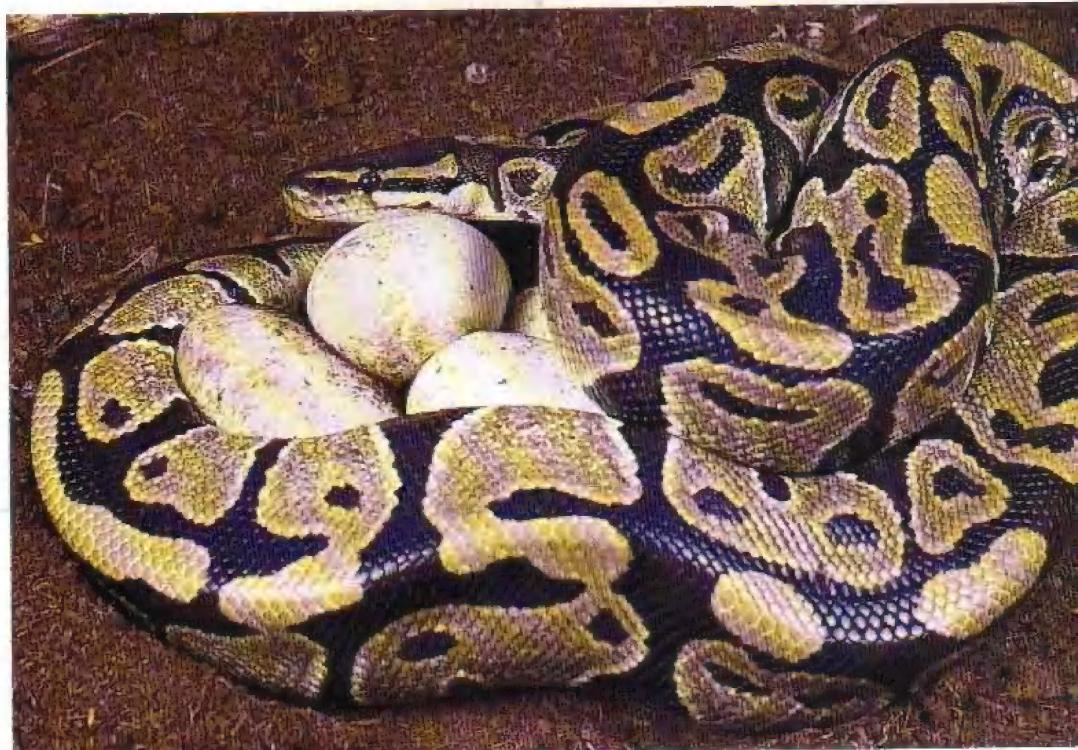


Photo by Jim Bridges

Adventures of Ranger Rick

by Sallie Luther; drawings by Alton Langford

The sounds of chomping grew louder. Someone—or something—was eating very noisily in the nearby bushes. But Ranger Rick Raccoon and Scarlett Fox hadn't even noticed. They were making too much noise themselves pushing through the thick undergrowth.

The friends were in the central African country of Rwanda. They had come to meet the rare mountain gorillas. And they were far up in a national park among long-silent volcanoes.

"Brother! This is rough going," complained Scarlett. The weather wasn't helping either. Thick fog hung like a soggy blanket. Freezing rain had blasted down only moments before. Cold mud clung to their paws like old oatmeal. "Are you sure we're on the right continent?" asked Scarlett, shaking water from her ears. "I thought Africa was supposed to be hot! *Brrr!* How can the gorillas stand it up here?"

"The cold *is* a problem for them," answered their guide, whose name was Happy. She was a rabbit-sized creature called a hyrax. "A long, long time ago, the gorillas lived down lower where it was warmer. But these mountaintops are about the only places left for them now."

"Look," Happy added, pointing to a bamboo shoot snapped off near the bottom. "I'll bet the gorillas are close by." The travelers were now standing still, and all could hear the noisy eating sounds: *crunch, cronch, crunch, cronch, chomp, chomp, chomp*. It was coming from across a deep but narrow ravine.

"Gorillas!" cried Happy happily.

"I can't wait to meet them," yelped Ranger Rick. Leaving Scarlett and Happy behind, he

raced out onto a slimy old log. Years ago it had fallen across the ravine, and now it made a handy bridge.

"Rick—*whoa—hold it!*" called Happy. "The gorillas don't like —" But the raccoon had already crossed the bridge and vanished into the thick forest beyond.

Meanwhile Scarlett was glaring at the log. "Yuk," she muttered, peering down into the ravine. "I hate heights. Are you sure this is the only way across, Happy?"

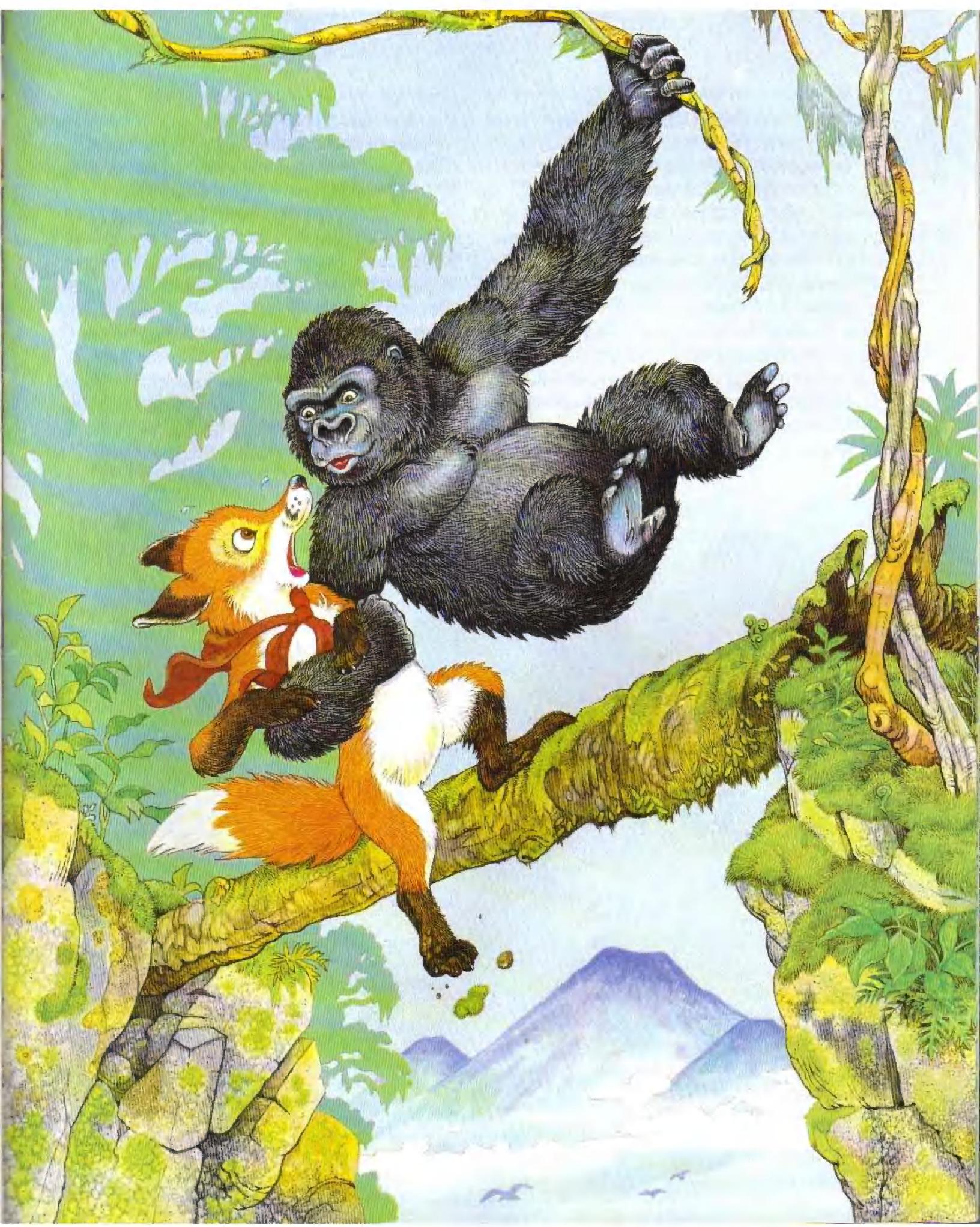
"*Yep,*" squeaked the hyrax. "But n-o-o-o problem, see?" She scooted out onto the slippery, wet surface and pranced a little dance. Then she skittered on across.

"*Eee-uuk,*" muttered Scarlett again. But inch by inch and toe by toe, she began to cross. Halfway there, Scarlett paused to look down, and that was a big mistake.

"Oh, no!" she wailed. "Splat city!" She teetered there, frantically trying to keep her balance. Then something dark dropped down from above her. Just as the fox began to fall, a long hairy arm snaked around her middle. Suddenly Scarlett found herself flying upward. Seconds later, safe on a tree limb high above the ravine, she looked up into a pair of friendly brown eyes. She had been saved by a young mountain gorilla.

"Gosh, thanks!" gasped the fox. "Mr. . . .?"

"Goner's the name," he answered. The gorilla lowered Scarlett to the ground safely across the ravine. Then he swung down beside her. But before they could say much more, horrible gorilla roars and screams shattered the air.



"Sounds like trouble!" said Scarlett.

"Come on," said Goner, loping toward the uproar. Scarlett and Happy sprinted after him.

"Wraaghhh!" came the screams, louder now. "Wraaghhh! Wraaghhh! Wraaghhh!!"

In a small clearing, two enormous male gorillas with silvery backs were looming over a very scared raccoon. Each was making fearsome calls and was stomping and strutting.

"Alpha, Beta!" called Goner. "Hey, hold it, guys! That's a friend, a *good* friend. He's Ranger Rick. I get his magazine!"

The ruckus stopped immediately. The two gorillas hunkered down on their haunches and looked really embarrassed. The raccoon had startled them badly by rushing up on them.

They had charged him to give the females and young gorillas a chance to escape.

"Ranger Rick?" said the one named Alpha. "The famous raccoon from Deep Green Wood? Well—do I feel like a jerk!" The gorilla turned and called toward the bushes. "It's all right, everybody. He's a friend."

Dark, curious eyes peeped out from hiding. Nine or ten gorillas of assorted sizes moved into the clearing. And Alpha, their leader, told the visitors why strangers weren't always welcome:

"We had a lot of trouble in the past," he began. "People brought herds of cattle into our park, and the cattle ate food *we* needed. Or people cut down our bamboo and trees for fuel and to make houses. And sometimes they planted crops here."



"Not to mention the people called *poachers*," added Beta, the second in command. "They killed us and sold our heads and hands as souvenirs—*souvenirs!*" he snarled.

"The poachers killed us for other reasons too," said a female gorilla who had come closer. "They killed the adults in gorilla families to make it easy to capture our young. Then they sold our babies to anyone who would buy one."

"That's awful," whispered Scarlett in horror.

"It happened to me once," spoke up Goner. "I was about to be shipped far away. But some people rescued me and set me free again. When my buddies saw that I was back, they said: 'Hey—we thought that you were a . . . !'"

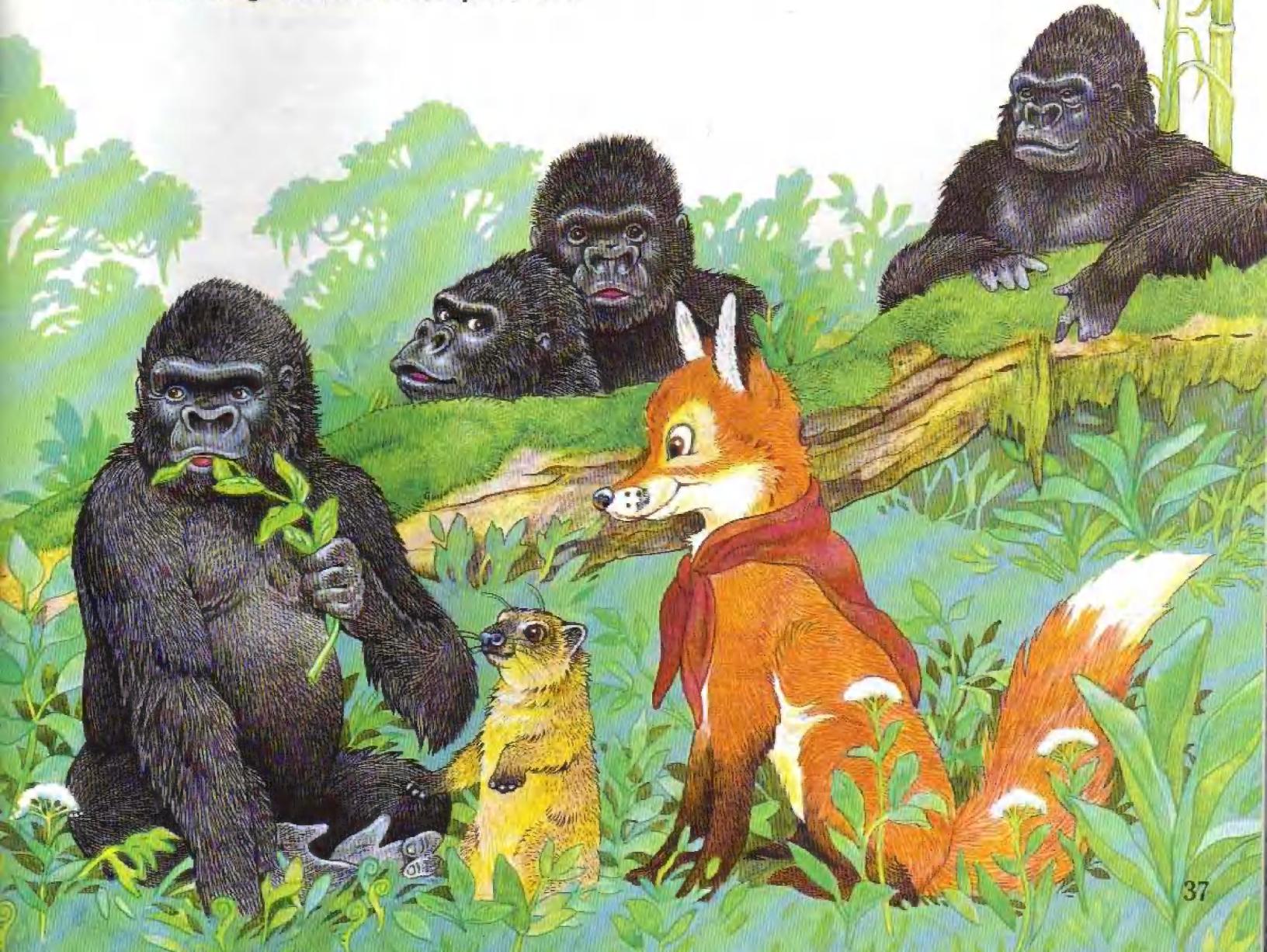
"*Goner!*" the animals all shouted together. When the laughter died down, Alpha contin-

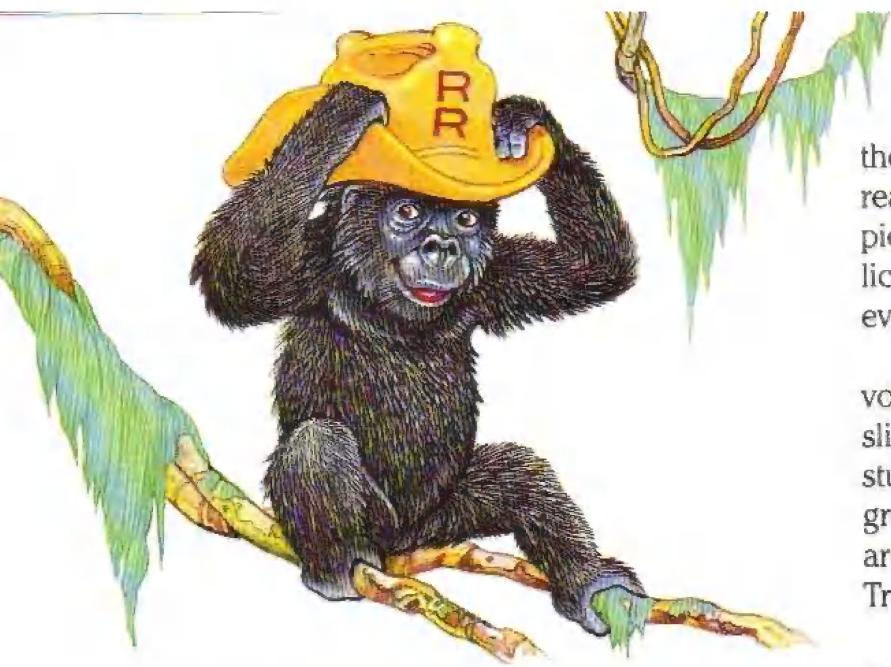
ued his story. "Scientists started studying us about 30 years ago. And they let the world know we were about to be wiped out. There were only about 240 of us left at one time."

"Then laws were passed to protect us, and lots of people started working to help us. Now things are a lot better for us around here." Alpha stopped suddenly and looked at the friends from Deep Green Wood. "But, say, after your hike, you must be nearly 'wiped out' yourselves. Can I offer you something to eat? Some wild celery, some juicy bamboo, a nice, crisp nettle?"

"Uh, no. Thanks, just the same," said Rick.

"But you can answer a question for me," put in Scarlett. (She had been watching a young





gorilla who had snatched Rick's hat and had run off to play with it.) "I thought gorillas couldn't climb trees, Goner. Yet you were up in one—lucky for me!"

Goner explained that young, lighter-weight gorillas like himself often climb trees or make their nests in them. But the older, heavier gorillas spend most of their time on the ground.

"And what about this 'King Kong' business?" asked Scarlett. "Is there any truth to that 'killer gorilla' stuff?"

"No, Scarlett," Alpha answered softly, "there's no truth to the scary things you hear."

"You could have fooled *me*," Rick teased.

"Oh," said Goner, "we can be fierce if we have to, like when something is threatening our family. But gorillas are really very gentle, peaceful animals."

The friends were still chatting when an odd noise came belching from the forest:

"*Naaoom, naaoom!*"

Rick and Scarlett jumped up and looked around wildly. But oddly enough, the apes didn't seem to take much notice.

"*Naaoom,*" belched Alpha, returning the call. Not too far away from the group, the bushes parted to reveal—people!

The fox and raccoon dived for cover, with Happy right behind them. They couldn't believe

the gorillas didn't hide too. Instead, one was reaching for more bamboo. Another gently picked through the fur of a third, looking for lice or bits of dirt. And a gorilla toddler was even wandering closer to the intruders.

"Don't worry—they're *tourists*," hissed a voice right next to them. It was Goner, who had slipped away from the group. "A scientist who studies us is leading them. She's learned our greeting call and uses it to let us know she's around. That way she won't get our Special Treatment, like *you* got, Rick," he teased.

"People come from all over the world to visit us," he added. "We've become stars!"

The friends from Deep Green Wood watched the tourists watching the gorillas. And Goner told them about something new that's going on: In many African countries and other places around the world, wild animals are getting more popular. Tourists are paying lots of money to see animals living in the wild. Some of that money is being used to help local people—bringing more jobs, more food, and so on. The money is also being used, for example, to hire guards to protect animals from poachers—the people who catch or kill animals illegally.

"Amazing," whispered Rick.

"Terrific," whispered Scarlett.

"But will it last?" asked Happy. "Doesn't it bother you, being stared at all the time?"

"Not so far," answered Goner. "Strange, isn't it? Just a short time ago, people were our biggest enemies. Now it seems they're our friends. The folks who live in the villages near our park and the folks in the government seem to feel the same way: More good comes from a lot of live animals than from dead ones. So, live and let live, right?"

"Right!" said Rick and Scarlett.

As the mountain gorillas went on with their meal, the tourists whispered and took pictures. Ranger Rick and Scarlett Fox watched it all—people and gorillas, at peace with each other. ☺



Mr. Tracey was nearly 90 and could no longer tend his onion patch the way he liked to. But this year he had two very special helpers named . . .

Gravel and Gertie



A story by D. M. Souza

The first day Mr. Tracey got his goslings, or baby geese, he invited me over to have a look. There they were, two small bundles of yellow fluff with big feet.

"Natural weeders, that's what they are," Mr. Tracey said fondly. He tossed the little birds some chick chow. "There are lots of weeds that they don't like to eat, but they'll gobble up plenty of their favorites. And grass . . . why, they eat that like candy!"

"But what about all your onions?" I asked.

"They look a lot like tall grass, so won't the geese eat them too?"

"Look like grass, but don't *taste* like it!" said Mr. Tracey. "They'll leave my onions alone."

"Yes, sir," he went on, chuckling, "this year I'll be able to grow and sell more onions than ever. And with no dirt flying, no garden tractor roaring, no gasoline smell, and no fuss."

I wasn't too sure. Those little guys could barely stand up. But in a week they were waddling around outside, *peep-a-deep-eeping*. I

couldn't help laughing as they made little grabs for tiny weeds and blades of grass.

"You just wait," Mr. Tracey kept saying.

Well, I waited, and I watched. Slowly the geese began to grow. Their downy yellow feathers were replaced by grown-up white ones. (Mr. Tracey had told me they were white Chinese geese.) Their necks grew longer and their feet grew bigger. Soon Gravel, the male, had grown even larger than Gertie, the female. And by now the two geese were hard at work inside the garden fence. Just as Mr. Tracey had said they would, they plucked weeds and blades of grass from around his onions.

A Goose on the Loose

One day Gertie slipped through a hole in the wire fence and began exploring. Suddenly Gravel realized he was alone.

Ah-HUUGG, ah-HUUGG, he called mournfully.

Gertie ignored him. She had found Mrs. Tracey's strawberry patch and was busy eating every berry she could find.

Ah-HUUGG, ah-HUUGG, the calls kept coming. And the farther away Gertie went, the louder Gravel called.

Finally Mrs. Tracey came out of the house. She saw what was happening and began to yell and wave her arms at the strawberry snatcher. Gertie hissed and Gravel bellowed, *doink, doink, doink!* He must have thought Mrs. Tracey was trying to hurt Gertie.

Mr. Tracey came to the rescue. He shooed Gertie back where she belonged and fixed the hole in the fence. And then he came up with a good idea. . . .

The next day Mr. Tracey built a fence around his wife's herb garden. Geese don't eat most herbs, so Gravel and Gertie could help her with her weeding too. "I'll put a fence around just about anything I want weeded," he said.

"There's the rose garden, the potato patch, the peach trees. . . ."

New Use for a Goose

Soon the peaches on Mr. Tracey's three peach trees began to ripen. Birdie Jackson and I were biking past when Birdie spotted the fruit. Birdie didn't know about the geese. But he knew that he wanted some peaches.

"Mrs. Tracey said I could have some," he urged. "C'mon, let's pick a couple."

"No, thanks," I said, chuckling to myself. Birdie likes to play jokes on people. And now one was about to be played on him. I knew that somewhere, Gravel's eyeballs were glued on us!

Birdie hopped over the wire fence and headed for the nearest peach tree. The next minute there was a loud *doink, doink, doink!* And a big white bird with wide-spread wings came dashing out from under some bushes: Gravel!

Birdie let out a whoop and a holler. Then he turned and headed for the fence. Gravel stretched out his long neck and held it close to the ground. He hissed his best evil-sounding hisses and gave chase. Somehow Birdie scrambled back over the fence, but not before Gravel nipped him in the rear end!

"Pretty good watch-goose, isn't he?" I asked.

The Geese Increase

Mr. Tracey cared for Gravel and Gertie all winter. Then the next spring, a strange thing happened: Gravel and Gertie disappeared. There was no sign of them anywhere. But Mr. Tracey didn't seem worried.

"They'll be back," he said calmly. "Don't worry about those two."

For over a month there were no *ah-HUUGG, ah-HUUGGs* or *doink-doink-doinks*. The weeds and grass had started to get thick among the onions. Then one Saturday, while I was visiting Mr. Tracey, we looked up—and there they were. Gravel and Gertie came waddling along, with eight bundles of yellow fluff between them.

They headed straight for the pond for a quick sip and dip. Then the family moved into the



Drawings by Patrick O. Chapin

overgrown onion patch. They all started feeding as fast as they could. Gravel looked around between bites, keeping careful watch over his family.

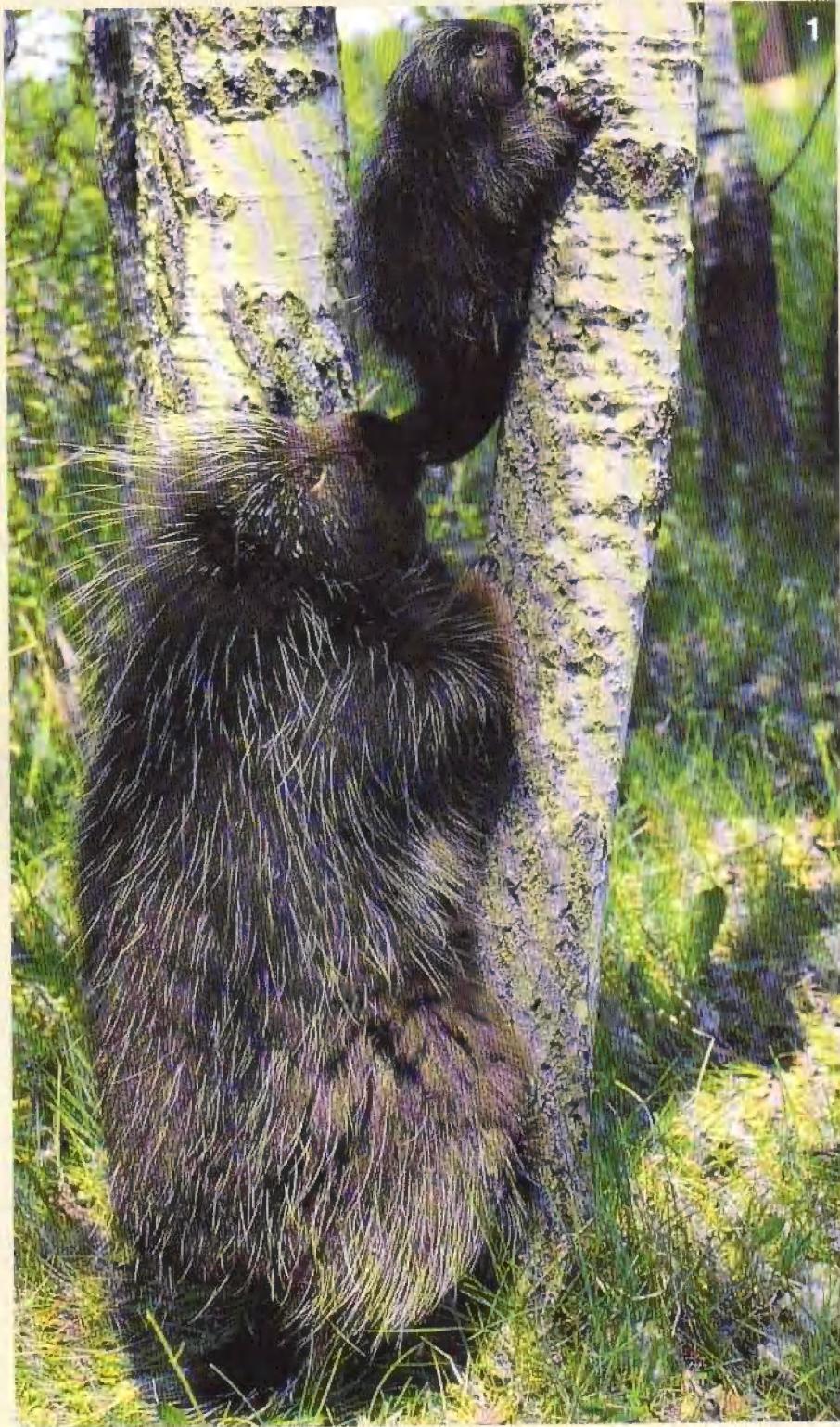
"What are you going to do with them all?" I asked after watching for a while.

"Plant more onions," said Mr. Tracey grinning, "maybe a couple more peach trees too. I could give some of the babies away, if you know anyone who might want them."

I chuckled for a minute. "Birdie Jackson," I teased. "I'll bet *he* would like a pair!"

"Ah-HUUGG, ah-HHHUUUGGG," went Gravel, as if he agreed with me. 

FAST FACTS: PORCUPINES



Photos by Lynn Rogers; Thomas Kitchin/Tom Stack & Assoc.

- Some people call porcupines "quill pigs." But they aren't really pigs. They're rodents—like mice, squirrels, guinea pigs, and beavers.

- Most rodents have big families with lots of young. But porcupines usually have only one young a year.

- Porcupines are great climbers (**see photo 1**). Long, sharp claws (**2**) and rough pads on the bottom of their feet really help them hang on. Even young porkies can easily climb trees just a few days after they're born.

- Porcupines make lots of different sounds, including whines, barks, moans, grunts, coughs, shrieks, and wails.

- Porcupines can't see very far. But they have excellent senses of hearing and smell.

Length: The North American porcupine is about 35 inches (90 cm) from head to tip of tail—the size of a cocker spaniel.

Weight: About 20 pounds (9 kg).

Range: Much of North America. See shaded area of map.









3



4

Photos by Tom & Pat Leeson, Alan Carey; David Cavaughnaro

- In cartoons and other stories, porcupines may "shoot" their quills at enemies. But real porcupines can't do this.
- The short quills of newborn porcupines are soft and wet. In a few hours, the quills dry and become stiff little stabbers.
- An adult porcupine has 30,000 or more quills. They cover its sides, back, and tail (3).
- The quills can be different lengths (4), and some are more than 3 inches (7.5 cm) long.
- When an enemy attacks, a porcupine whirls around with its sharp quills raised (see photo 3). It swishes its tail from side to side. An enemy that gets whacked with that prickly tail will be sorry (5).
- The tip of each needle-sharp quill is covered with hundreds of tiny hooks, or barbs. They keep the quills from falling back out once they've stabbed into an animal. And as the animal moves, the barbs hook in and pull the quills deeper.



5

The quills can move an inch (2.5 cm) deeper each day.

- Porcupine quills can be deadly. For example, a quill stuck in an animal's side may move deeper and deeper until it stabs the animal's heart. Quills in its face or throat could keep the animal from eating until it starves to death. (Lucky for the dog shown here, its owner soon had a vet pull out the quills.)



6



7



8

■ Porcupines spend lots of time gnawing, so it's good that their long orange front teeth (**6**) keep on growing. Otherwise the porkies would wear them down to nubs in no time!

■ There are plenty of things on a porcupine's menu: In spring and summer it eats shrubs, wildflowers, berries, bark, twigs, and nuts. In late fall and winter it eats mostly bark, leaving behind patches of bare tree trunk (**7**).

■ Some people have a "sweet tooth." Porcupines have a "salty tooth"—they love the taste of salt. Since there's salt in human sweat, porcupines often gnaw things people have handled. They'll even find a way into people's cabins (**8**) to chew up furniture, shoes, and other salty snacks.

■ Not many animals can get around the porcupine's prickly defenses. But a weasel-like animal called a fisher (**9**) knows how to get a porcupine meal. It attacks the porky's face, then slips a paw underneath the porcupine. *Flip!* The porcupine lands on its back, and the fisher rips open its soft belly. A fisher may even tunnel through the snow to attack a porky from underneath.

■ Most creatures won't even try to attack a porcupine. These "walking pincushions" can usually take pretty good care of themselves!

—Kathy Walsh

Photos by John Cancalosi/Tom Stack & Assoc., Duane Sept, Tom Mangelsen, Paul E. Meyers



**It's a peaceful time at the nest for this black-winged stilt and her
newly hatched chick . . . or is it? (Turn to page 18 to find out.)**

